REPORT RESUMES

ED 019 650 AL 000 961

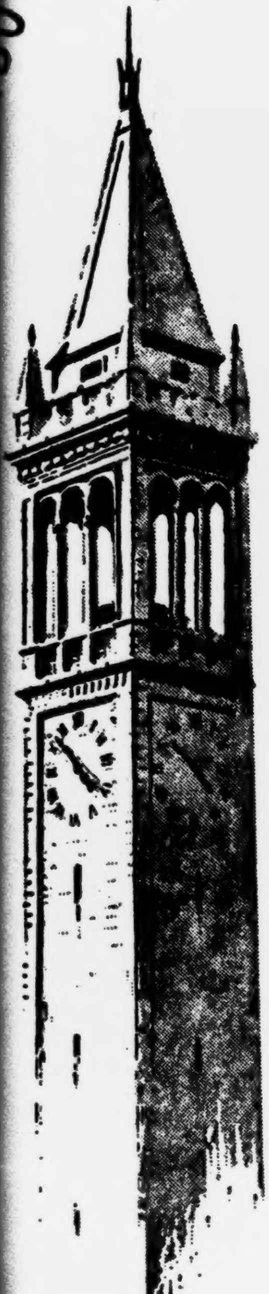
UNIVERSE-SCOPE RELATIONS AND MANDARIN NOUN PHRASES.
BY- CHENG, ROBERT L.
CALIFORNIA UNIV., BERKELEY, PHONOLOGY LABORATORY
REPORT NUMBER POLA-2-3 PUB DATE NOV 67
NATIONAL SCIENCE FOUNDATION, WASHINGTON, D.C.
REPORT NUMBER GS-1430
EDRS PRICE MF-$0.75 HC-$7.48 185P.

DESCRIPTORS- *MANDARIN CHINESE, *NOMINALS, *LANGUAGE RESEARCH, DEEP STRUCTURE, SURFACE STRUCTURE, *SEMANTICS, DISCOURSE ANALYSIS, TRANSFORMATION GENERATIVE GRAMMAR, COMMUNICATION (THOUGHT TRANSFER),

THIS REPORT DISCUSSES HOW NOUNS AND THEIR ADJUNCTIVES ARE USED IN MANDARIN SENTENCES IN DENOTING THE RELATION BETWEEN SETS AND THEIR SUBSETS. LANGUAGE HAS SOME MEANS OF SPECIFYING SETS OF OBJECTS, ACTIONS, OR ABSTRACT UNITS IN VARIOUS WAYS, IN ORDER TO HAVE SUCCESSFUL COMMUNICATION. LANGUAGE DOES NOT BEAR THE ENTIRE BURDEN OF SPECIFYING A CERTAIN SET UNAMBIGUOUSLY, HOWEVER. NONLINGUISTIC CONTEXTS ALSO PLAY SOME PART IN DECIDING THE REFERENCE INTENDED BY LINGUISTIC EXPRESSION, AND WITHOUT THESE CONTEXTS, AMBIGUITIES MAY BE UNSOLVABLE. THE DEGREE OF RELIANCE ON NONLINGUISTIC CONTEXTS SEEMS TO VARY FROM ONE LANGUAGE TO ANOTHER, AND CHINESE SHOULD NOT BE REGARDED AS ONE OF THOSE WHICH HAVE A LOW DEGREE OF RELIANCE UPON LIFE CONTEXTS FOR UNIQUENESS OF REFERENCE. CHINESE TEXTS ARE NOT MORE AMBIGUOUS THAN THE TEXTS OF OTHER LANGUAGES. IF THEY ARE LONG, THEY ARE USUALLY AS CLEAR AS THOSE OF ANY OTHER LANGUAGE. RELIANCE ON NONLINGUISTIC CONTEXTS IS HEAVY ONLY WHEN A TEXT IS SHORT AND SENTENCES ARE AMBIGUOUS ONLY WHEN THEY ARE TAKEN FROM LONGER TEXTS. FOR THE PURPOSES OF THIS PRESENTATION, THE AUTHOR RECOGNIZES TWO KINDS OF MEANINGS--(1) ON THE DENOTATIVE LEVEL, IN WHICH THE NOTIONS OF THE ACTOR-OF, THE RECEIVER-OF, ACTION, TIME, PLACE, ETC., ARE RELEVANT, AND (2) ON THE DISCOURSE LEVEL, IN WHICH THE NOTIONS OF THE TOPIC-OF, THE COMMENT-OF, ETC., ARE RELEVANT. THIS IS A REVISED VERSION OF THE SIXTH CHAPTER OF THE AUTHOR'S DOCTORAL DISSERTATION ENTITLED "SOME ASPECTS OF MANDARIN SYNTAX," INDIANA UNIVERSITY, 1966. CORRESPONDENCE CONCERNING POLA MATTERS SHOULD BE ADDRESSED TO WILLIAM S-Y. WANG, DEPARTMENT OF LINGUISTICS, UNIVERSITY OF CALIFORNIA, BERKELEY, CALIFORNIA 94720. (AMM)

PHONOLOGY LABORATORY – DEPARTMENT OF LINGUISTICS
UNIVERSITY OF CALIFORNIA, BERKELEY

19650



Project On Linguistic Analysis

Reports. Second Series, No. 3 November 1967

Pola-2-3

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

~~William S-Y. Wang. Conjoining and Deletion in Mandarin Syntax~~ ~~W1-W21~~
Robert L. Cheng. Universe-scope Relations and Mandarin Noun Phrases 1-182

AL 000 961

Reproduction in whole or in part is permitted for any purpose of the United States Government.

The Project on Linguistic Analysis is supported in part by the National Science Foundation (Grant GS1430), the Office of Naval Research (Contract N00014-67-A-0114-0005), and the Air Force (Contract F30602-67-C-0347). It is administered through the Phonology Laboratory of the University of California at Berkeley, which has its office in 51 Dwinelle Hall (Telephone: 845-6000, Extension 1507).

Correspondence concerning POLA matters should be addressed to William S-Y. Wang, Department of Linguistics, University of California, Berkeley, California 94720

Universe-scope Relations and Mandarin Noun Phrases*

Robert L. Cheng

University of York

---

*The preparation of this study was supported in part by the National Science Foundation (Grant GS1430), and in part by the Air Force (Contract F30602-67-C-0347).

AL 000 961

INTRODUCTION

The purpose of this paper is to discuss how nouns and their adjunctives are used in Mandarin sentences in denoting the relation between sets and their subsets.[1]

It is obvious that language has some means of specifying sets of objects, actions, or abstract units in various ways, in order to have successful communication. It seems, however, that language does not bear the entire burden of specifying a certain set unambiguously. Nonlinguistic contexts also play some part in deciding the reference intended by linguistic expression, and without these contexts, ambiguities may be unsolvable.

The degree of reliance on nonlinguistic contexts seems to vary from one language to another, and Chinese should not be regarded as one of those which have a low degree of reliance upon life contexts for uniqueness of reference. This does not mean that Chinese texts are more ambiguous than the texts of other languages. As a matter of fact, Chinese texts, if they are long, are usually as clear as those of any other language. Reliance on nonlinguistic contexts is heavy only when a text is short, and sentences are ambiguous only when they are taken from longer texts. This may be due to the fact that Chinese uses deletion more freely and frequently than most other

0

well-known languages. For example, the definite marked *nà* 'the' plus the classifier (M) *ben* in the following Chinese sentence is deletable, although some ambiguity will result (*shu* 'the book' or 'the books'), whereas the definite article *the* in the English translation can never be deleted.

1. (*naben*) *shu* *ni* *dai lai* *le* *meiyou*?
   the book you bring ASP NEG ASP
   'Did you bring the book?'

If language is frequently ambiguous in denoting a set of objects or abstract units, then we cannot expect it to be free of ambiguity in denoting the relationships between sets and their subsets. Moreover, the optional occurrence of some grammatical markers in the surface realization results in further ambiguity in identification of sets, as well as in identification of the relationship between sets. For example, the relationship between the two sets of objects denoted by the following two nominals can be understood in more than one way.

2. (a) *nimen* *laoshi* *yinggai qu*
   you PL teachers must go
   'You teachers should go.'
   'Your teacher(s) should go.'
   (b) *nimen de laoshi* *yinggai qu*
   'Your teacher(s) should go.'

The optional deletion of the genitive marker *de* under certain circumstances renders sentences such as 2 (a) ambiguous.

In sentences where grammatical markers denoting the relationship between sets and their subsets are absent, however, there are usually clues for the identification of sets and subsets.

3. (a) *wo yijing duguo na baben shu* (*dangzhong*) *de*
I already read that 8 M book among
sanben le.
3 M
'I have already read three of the eight books.'

(b) *Na baben shu wo yijing duguo sanben le*
'As for the eight books, I have read three of them.'

The relation between *na baben shu* 'those eight books' and *sanben* 'three books' can be easily recognized, no matter whether the relational marker *dangzhong* 'among, within' appears in the sentence or not.

The domain of this study is not as clearcut as my delineation in the first sentence of this paper might suggest. First of all, we are not always sure whether the notions of whole and part, set and subset, or universe and scope are expressed in given sentences. For example, it is clear that the idea of the set-subset relationship is present in (a) and (b) below, and not in (c) and (d). But we are not quite sure whether such an idea is contained in (e) and (f) or not.

4. (a) *tushuguan li de shu ta xiang kankan naxie yong*
library in book he think see use
zhongwen xie de
Chinese write
'He wants to see the books in the library that are written in Chinese.'
'Of the books in the library, he wants to see those written in Chinese.'

(b) *ni yao ba zhongyao de shu dangzhong tiaochu*
you must important book among select
rongyi de xian du
easy first read
'You have to choose among the important books and read the easy ones first.'

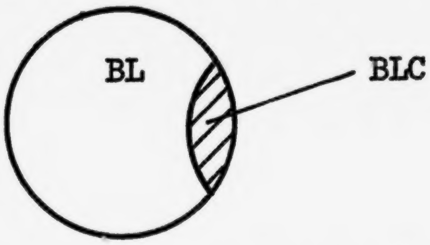
(c) *wo xiang kankan tushuguan li de shu*.
'I want to see the books in the library.'

(d) *wo xiang kankan yong zhongwen xie de shu*.
'I want to see books written in Chinese.'

(e) *ni* *yao* *xian* *kan* *rongyi* *er* *zhongyao* *de* *shu*
you first read easy important book
'You have to read easy and important books first.'

(f) *women* *xiang* *kankan* *tushuguan* *li*, *yong* *zhongwen* *xie* *de* *shu*.
'We want to see the books that are in the library and written in Chinese.

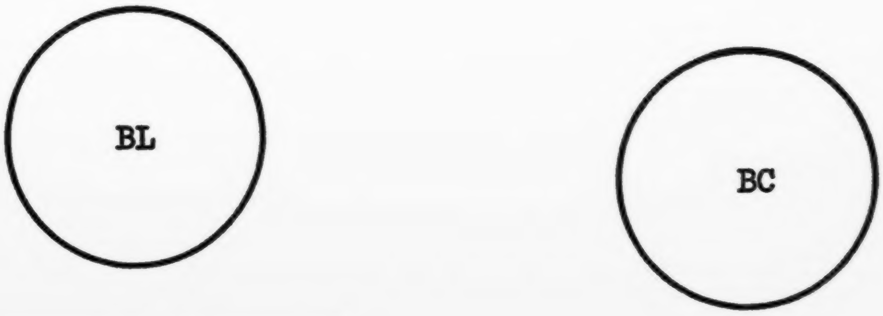
(a')



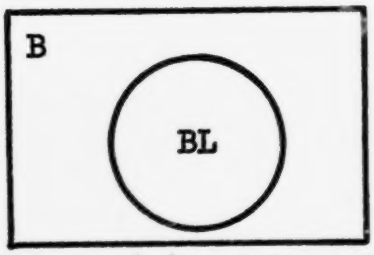
Let BL = *tushuguan* *li* *de* *shu* 'books in the library'
BLC = *tushuguan* *li* *de* *yong* *zhongwen* *xie* *de* *shu* 'books in the library that are written in Chinese'
BC = *yong* *zhongwen* *xie* *de* *shu* 'books written in Chinese'

We feel confident in saying that the two expressions: *tushuguan* *li* *de* *shu* and *naxie* *yong* *zhongwen* *xie* *de* in sentence (a) mean what is shown in (a'). That is, in (a) two groups of books are mentioned: the books in the library (represented by BL) and what the speaker wants to see. It is only the shaded portion (BLC) that is properly included in the first group of books.

(c'i)



(ii)



For sentence (c) we also feel confident in saying that only one group of books is mentioned in the sentence, and that diagram (i) rather than (ii) should be chosen for a better representation of (c), reserving diagram (ii) for sentence (g).

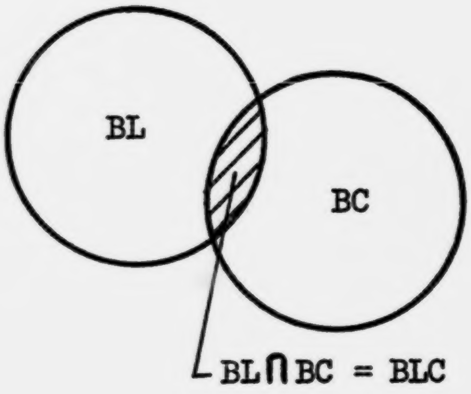
(g) shu ta xiang kankan tushuguan li de

'As for books, he wants to see those in the library.'

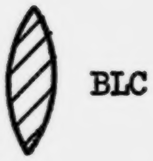
The same can be said for sentence (d) and diagram (d'). The difference between (b) and (e) is similar to that between (a) and (f).

The above explanation shows the semantic domain of this paper. It is, of course, difficult to define the domain of a linguistic topic on a semantic basis. This can be illustrated by the following question: how many sets or groups of books are mentioned in sentence (4f)?

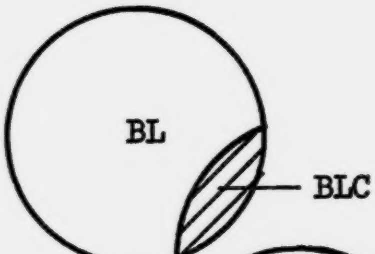
(f'i)



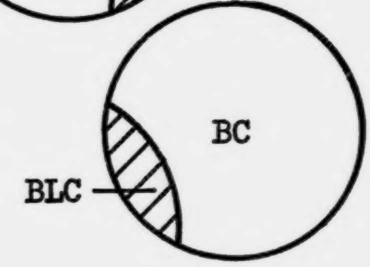
(ii)



(iii)



(iv)



Four answers are possible, as shown above.[1a] (iv) is very unlikely; so is (i), unless a logically sophisticated speaker is answering the question. Diagrams (ii) and (iii) are both likely.

Here it is significant to notice that, so far as reference is concerned, the four interpretations in (f') are identical, since what the speaker wants to see is the part represented by BL $\cap$ BC, which is equal to BLC. Moreover, sentence (a) and (f) can be said to be equivalent, so far as the reference of what the speaker wants to see is concerned.

Another difficulty in defining the whole-part relationship on a semantic basis comes from the analysis of nonconcrete elements such as time units, action frequencies, and other abstract units.

5. (a) *qunian* *wo* *zai* *nar* *zhule* *hen* *jiu*

last year I at there live very long

'I lived there for a long time last year.'

(b) *qunian* *wo* *zai* *nar* *zhule* *liangge* *yue*

'I lived there for two months last year.'

(c) *qunian* *wo* *changchang* *dao* *nar* *qu* *zhu*

frequently go

'I often went to stay there last year.'

(d) *qunian* *wo* *zai* *nar* *zhule* *liang* *ci*

two times

'I went there to stay twice last year.'

(e) (*yiqian*) *wo* *zai* *nar* *zhule* *hen* *jiu*

before

'I stayed there very long (before).'

(f) wo zai nar zhu guo.

ASP

'I have lived there before.'

If we recognize a whole-part relationship between qunian 'last year' and hen jiu 'very long' in (a) or liangge yue 'two months' in (b), each of which is an expression of duration of time, shall we also recognize such a relationship between the qunian and the changchang in (c) or the liang ci in (d), the last two of which are expressions of frequency? Shall we recognize any whole-part relation between yiqian 'before' and hen jiu 'very long'? Judging from the meaning of yiqian in the sentence (that is, the period of time from my birth to the present), there seems to be no reason to deny the existence of such a relationship in (c) and (d). But what about sentence (e) without yiqian 'before,' which means the same thing? And what about sentence (f), in which the aspect marker implies that I at least lived there at one time within the period from my birth to the present? We are not very clear about the treatment of the reference that is not overtly expressed, but is merely indirectly implied by some element in the sentence.

It seems clear that a portion or a subset of a larger set may not necessarily be realized as a noun, as can be seen in (e), where the adjective *hen jiu* 'very long' is used to express a portion of time, and in (4g), where the adjective *hen duo* 'very much' or 'very many' is used to describe the amount of a subportion.

4. (g) *shu ta kan le hen duo le*
book he see very many
'As for books, he has read a lot (of them.)'

Compared with the problem of defining the domain of this study semantically, the problem of identifying the syntactic notions 'noun' and 'noun phrase' seems less complicated.

Elements that can function as subject or object are nouns. Even in cases where in the surface realization there is no noun in a noun phrase, the identification of noun phrases in the subject or object is generally easy.[2]

6. *mai hua de lai le meiyou?*
sell flower come ASP NEG ASP
'Has the flower seller come?'

Examples of part of a noun phrase behaving like adverbs are *dayue* 'approximately,' *dou* 'all,' and *zhi* 'only.' These have been treated as adverbs by grammarians because they usually occur in the following position, where most preverbal adverbs occur.

NOUN + ______ + VERB + NOUN

Judged from their cooccurrence restrictions with some nouns and what they denote in connection with nouns, they should obviously be regarded as part of some noun phrase.[3]

Although the prepositional-postpositional phrase chule Wang yiwai 'besides Wang' or 'in addition to Wang' has often been considered adverbial, I analyze it as part of a noun phrase because of its close syntactic and semantic connection with a noun in the sentence.

In the case of time and place expressions, a decision on the borderline between noun phrases and non-noun phrases is more difficult. If sange xiaoshi 'three hours' or liangnian 'two years' is nominal, can hen jiu 'very long' be regarded as nominal, with the head noun shijian 'time' deleted in the surface realization? The similarity between hen jiu 'very long' and liangge yue 'two months' in (5a) and (5b), respectively, suggests that they should be treated alike in the deep structure, and that they should be understood as (5a') and (5b'), respectively.[4]

5. (a') qunian wo zai nar zhu le yiduan shijian
'Last year I stayed there for some period of time.'

zhe yiduan shijian hen jiu

'This period of time is very long.'

(b') qunian wo zai nar zhu le yiduan shijian

'Last year I stayed there for some period of time.'

zhe yiduan shijian you liangge yue

'This period of time is two months.'

With the above brief discussion on the domain of this study, I shall now describe my approach.

Since the publication of Chomsky's Syntactic structures (1957), the form and theory of generative grammar have been undergoing great changes, and will probably continue to change.

This paper is intended to be an informal inquiry into a roughly defined aspect of a particular language.[5] I will not, in general, undertake to formalize my observations as rules; rules and P-markers, where I do give them, are only for explanatory convenience. I accept certain general assumptions of generative transformational grammar: that the structure of actual sentences is best represented in terms of surface structures which are derived from their deep structures; that the syntax of a language consists of two parts: (1) the Base, which generates deep structures, and (2) the Transformation, which turns the deep structures into surface structures; and that deep structures should account for the semantic interpretation of sentences, while surface structures should supply relevant information for phonetic realization. I do not, however, follow strictly any model of formalization or set of conventions proposed by a particular scholar for writing a generative grammar; I prefer to interpret structures without the bias of theories which are still developing and still inadequate, especially for the subject treated in this paper. This is, of course, in one sense a handicap. Many decisions made in this study may be arbitrary and lacking in the support of general theory.

My position in this paper with regard to the relation between syntax and semantics is, admittedly, vague.[6] What I am clear about is that deep structures, which are the output of the Base, provide the basis for the semantic interpretations of sentences and are postulated for their simpler surface realization. Hence I have made it a rule to represent one semantic interpretation by one deep structure, disregarding the differences or similarity among actual sentences. This principle, to be sure, is very difficult to follow in practice, since we do not yet have objective criteria for determining whether two given sentences have the same meaning or not.

Taking the following sentences for example, are (a) and (b) identical in semantic interpretation? How many meanings are possible in sentence (b)?

7. (a) wo du le na baben shu de sanben le
I read that eight book three
'I read three of the eight books.'

(b) na baben shu wo duguo sanben le
that eight book I read three
'As for the eight books, I have read three of them.'

Tentatively, I shall, for the purposes of presentation, recognize two kinds of meanings: (1) meanings on the denotative level, in which the notions of the actor-of, the receiver-of, action, time, place, etc., are relevant, and (2) meanings on the discourse level, in which the notions of the topic-of, the comment-of, etc., are relevant. It is on the denotative level that (a) and (b) are identical, and it is on the discourse level that (a) and (b) are different. This does not mean that I advocate two subcomponents in the Base. I simply do not know how the second kind of meaning should be incorporated in the grammar; I can only discuss several possible ways of handling this problem. Therefore, in the first few chapters I shall ignore the difference between the two sentences and postulate the same deep structure for their basic semantic interpretation. In a later chapter I shall discuss several ways to account for the difference between two such sentences.

1. Components of determinatives

The notion of the determinative or adjunct to the noun seems so widespread among linguists that it is hardly necessary to define it here. From a semantic viewpoint, the determinative either defines the denotation together with the head noun or describes the reference already defined by other parts of the noun phrase.

The following determinatives may appear as part of the matrix string or as part of an embedded string in the Base.

1.1. Quantitatives and their equivalents

		NUP	N	
8.	(a)	sange	ren	'three persons'
	(b)	henduo	ren	'many persons'

1.2. Modifier (MOD).

		MOD	N	
9.	(a)	hong	shu	'red book'
	(b)	yao lai de	ren	'people who are coming'

1.3. Genitive (GEN).

		GEN	N	
10.	(a)	wode	zhipiao	' my check'
	(b)	womende	chezi	'our car'

1.4. Specifying markers

di '-th', *qian* 'front,' *shang* 'upper,' in the following phrases, and *hou* 'back,' *xia* 'lower,' etc., can be called specifying determiners, since they serve to restrict nouns by specifying their position in terms of space:

11. (a) *dì* *sange* 'the third'
(b) *qián* *sange* 'the front three'
(c) *shàng* *yige* 'the upper one'

Among these only *di* '-th' needs to be introduced in the Base. The rest can be derived from a modifier with a locative time expression plus a definite marker. Hence (11b, c) may have come from (12b, c), respectively.

12. (b) (*nà* *sange*) *zài* *qiánbian* *de* *nà* *sange*
at front that three
The three that are in the front.'

(c) (*nà* *yíge* *zài* *shàngbian* *de* *nà* *yige*
at above that one
'The one on the top.'

1.5. Definite and indefinite markers

The *yǒu* in (13a) and *nà* in (13b) can be regarded as indefinite marker and definite marker, respectively. (See Section 3.7.4. for alternative solutions for indefinite *yǒu*.)

13. (a) *yǒu* *yige* *rén* *yào* *jiàn* *ni*
one person want see you
'Someone wants to see you.'

(b) *wǒ* *yǐ* *dú* *guo* *nà* *ben* *shu* *le*
I already read that book
'I have read that book already.'

1.6. Generic marker

Nouns of generic reference are usually unmarked, as in (14a), but if the generic reference is emphasized, the marker *fanshi* or *suoyoude* 'all, any, so long as' is used as in (14b).

14. (a) *xiang* *bizi* *hen* *chang*
elephant nose very long
'An elephant has a long nose.'

(b) *fanshi* *xiang* *bizi* *dou* *hen* *chang*
so long as elephant nose all very long
'All elephants have long noses.'
'So long as it is an elephant, it has a long nose.'

1.7. Deictic marker

The deictic markers *zhe* 'this, these' and *nà* 'that, those' should be distinguished from their homonyms: the *zhe* and *nà* in (1) the prodegree *zheme*, *nàme* (2) the proadverbs of manner *zhemeyang* 'this way,' *nàmeyang* 'that way' (3) the pronouns *zhege* 'this one,' nàge 'that one,' zhexie 'these,' nàxie 'those,' and (4) prosentences--zhe and nà as in (15):

(15) ta bu xiang qu le $\left\{\begin{matrix}\text{na}\\ \text{zhe}\end{matrix}\right\}$ zenmo xing

he not want go $\left\{\begin{matrix}\text{that}\\ \text{this}\end{matrix}\right\}$ how be right

'He does not want to go any more. How could $\left\{\begin{matrix}\text{that}\\ \text{this}\end{matrix}\right\}$ be possible?' (or 'This won't do.')

and (5) the definite marker nà, etc. Admittedly, the distinction is sometimes hard to make.

The deictic marker zhe denotes (or implies) the presence of the object in question near the speaker; nà denotes its location far from the speaker.

The definite marker nà has little near/distant or now/then reference (16a, b), since such reference is often denoted in the restrictive modifier. As a matter of fact, the definite marker nà can be deleted, if the preceding restrictive modifier is not deleted, without affecting the meaning of the sentence.

16. (a) ta zuotian diu de nà wǔzhi qianbǐ yìzhí

he yesterday lost that five pencil still

mei zhaodao

not find

'The five pencils he lost yesterday have still not been found.'

(b) *nà* *wǔzhi* *qianbǐ* *wo* *zhǎodao* *le*
that five pencil I find
'I found the five pencils.'

(c) *jiù* *shi* *zhè* *wǔzhi*
be this five
'They are these five.'

(d) *bú* *shi* *nà* *wǔzhi*
not be that five
'They are not those five.'

(e) *shì*, *zhèxie* *zài* *wo* *qiánmian* *de* *nà* *wǔzhi* *qianbǐ*
yes these at I front the five pencil
jiù *shì*
be
'Yes, they are those that are in front of me.'

The *nà* in (a) and (b) is a definite marker. The restrictive modifier may be absent as in (b), and then the definiteness of the noun is indicated solely by *nà*. That the definite marker and the deictic marker are different can be seen from the contrast in (b, c, d)--(b) and (c) are spoken by the same person about the same five pencils--and the cooccurrence of the deictic marker *zhè* 'this, these' and the definite marker *nà* in (e).

That the deictic marker is closely related to the locative can be seen from (17a), in which the deictic marker *zhè* 'this' does not match the *nàr* 'there.'

The *nà* and *zhè* do not have to match the locative in (17d) and (e), since the locatives are in the modifying clause and not in the main clause.

17. (a) **zhe* *wuben* *shu* *zai* *nàr*
this five book at there

(b) (*xianzai*) *zai* *wo* *qianmian* *de* *zhe* *wuben* *shu*
(now) at my front this five book
shi *shei* *de*?
be whose
'Whose are these five books which are (now)in front of me?'

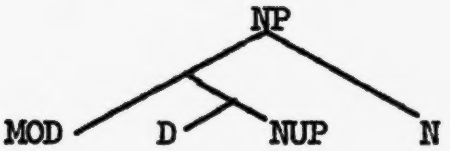
(c) (*xianzai*) *zai* *ni* *zhuoshang* *de* *nà* *wuben* *shu*
(now) at your desk
shei *de*?
'Whose are $\left\{\begin{matrix}\text{the}\\ \text{those}\end{matrix}\right\}$ five books which are (now) on your desk?'

(d) (*zuotian*) *zai* *wo* *zhege* *zhuoshang* *de* *nà* *wuben*
(yesterday) my desk
shu *shi* *wo* *de*
mine
'The books that were on my desk (yesterday) are mine.'

(e) (*zuotian*) *zai* *ni* *nàge* *zhuoshang* *de* *zhe* *wuben* *shu* *shi*
(yesterday)
ta *de*
his
'These five books which were on your desk (yesterday)
are his.'

A problem arises, however, when one has to decide whether the *zhe* in (17b), and the *nà* in (17c) are deictic markers, definite markers, or both. In view of the fact that the noun phrase in (16a) has a similar structure to that in (17b) and (c), i.e. 18, one wonders if there is any formal criterion to distinguish the two.

(18)



The answer is negative, even though *nà* without a deictic reference is never placed before MOD, and there is a tendency for *nà* with a deictic reference to precede MOD. For the *nà* in (17c) may or may not have such a reference, as can be seen from the translations. It should be noted here that two *na*'s (definite and deictic) are recognized, in spite of this lack of definite criteria to determine whether *nà* has a deictic reference or not, and in spite of the ambiguity that the *nà* may have in most of its occurrences in this position (i.e. MOD + ___ +NUP+N).

As for the *zhè* in (17b), this should be regarded as a deictic marker only, not as both deictic and definite. This means that there is only one definite marker (i.e. *nà*), and *zhe* can only be a deictic marker when it is used as a determiner (i.e. when it is not used as a pronoun). This is so because definiteness is implied in deixis, and there is no need to recognize two morphemes, one of which is always implied by the other.[7] We need to recognize a definite marker *nà*, because there are nouns that are definite, but do not necessarily have any deictic reference.

Occasionally people use *zhè* 'this' for persons or things which are not present.

19. (a) *nǐ* *juéde* *Wáng* *xiansheng* *zěnyang*?
you feel Wang Mr. how
'What do you think of Mr. Wang?'

(b) *wǒ* *juéde* *zhège* *rén* *zhen* *qíguài*.
I feel this person real strange
'I think this man is very strange.'

But we still can regard the *zhè* 'this' in (19b) as a deictic marker because the name Mr. Wang is present in either a written or a spoken form. A similar use of the deictic marker zhè for referring to a name rather than the object itself can be seen in

20. (a) Wáng xiansheng zhège ren zěnyang?
Mr. this person how
'What do you think of Mr. Wang?

(b) zhège ren nǐ juéde zěnyang?
this person you feel how
'What do you think of this person?'

zhè 'this' in (20a) refers to the Wáng xiansheng 'Mr. Wang' just mentioned. The zhè in (20b) may be used when the speaker is pointing to the name of a person on a list.

An extended use of zhè 'this' and nà 'that' is their spatio-temporal reference in proadverbs of manner and pronouns: nà is used to replace an object or action existing at a place or time remote from here or now and zhè for that which exists here and now.

As sentence substitutes zhè and nà have hardly any near vs. distant reference; the choice between the two is rather arbitrary. (See 15)

1.8. Scope expressions

quánbu 'totally; all,' dàbufen 'majority,' etc., have been generally regarded as adverbs of scope.

		quánbu		'They all want to go.'
		měi yige		'Every one of them wants to go.'
21. (a)	tamen		dou yao qu	
		gège		'Every one of them wants to go.'
		dàbufen		'The majority of them want to go.'

(b)
tamen zhǐyou {jǐge / xiǎobufen} yao qu
they only want to

'Only a few of them want to go.'
'Only the minority of them want to go.'

In this analysis they will be regarded as a part of the determinative.

1.9. Adverbs of impression of scope

dou 'all' and zhǐ 'only' in (21a) and (21b), respectively, indicate the speaker's impression of the scope of the noun. Since they often go with the verb, and cannot occur with a noun but without the verb in the surface realization, they are usually regarded as verb adjuncts. This analysis treats them as part of the determinative because of their close relationship with the scope expressions, including the numerals in the determinative.

1.10. Limiting adverbials

The limiting adverbials are often considered as subordinate phrases or clauses conjoined to the main clause by conjunctions: chúle . . . yǐwai 'besides, except,' qíta de 'others.'

22. qítade nà jiǔge rén quán dou sǐ le
other that nine person all die
'All the other nine persons died.'

23. nà jiǔge rén chúle ta yǐwài dou sǐ le
that nine person except he all die
'The nine persons all died, except him.'

For reasons to be given shortly, I regard limiting adverbials as part of the determinative.

2. Definite, indefinite and generic reference

2.1. Definite and indefinite reference

Though Chinese has what we may call definite and indefinite markers, it tends to depend on word order to indicate definite and indefinite reference. (Cf. Chao, 1965, p. 98-) Definite nouns tend to be placed before the verb or even the subject, whereas indefinite nouns are usually placed after the verb. It is noteworthy that nouns in such positions may or may not have a marker for definiteness or indefiniteness.

24. (a) wǒ yao qǐng kè
I want invite guest 'I want to invite some guest(s).'
'I want to treat (some one).'

(b) kèren lái le
guest come 'The guest(s) has (have) come.'

But definite nouns do occur after the main verb, and indefinite nouns before it, and in these cases definiteness and indefiniteness are usually, though not always, marked.

25. (a) wǒ xiě wán nà yi fong xìn le
I write finish that one letter
'I finished writing that letter.'

(b) yǒu yíge péngyou sòng wo yìben shu

a friend give me a book

'A friend (of mine) gave me a book.'

A noun appearing after the main verb may be definite and yet unmarked. These cases of unmarked definite nouns may include instances such as the following:

(1) when the noun has generic reference

26. Zhongguo rén dou zunzhòng lǎo rén

Chinese people all respect old people

'All Chinese respect aged people.'

(2) when the definiteness of a noun is understood from the meaning of the noun (i.e. proper nouns or their equivalents).

27. nǐ kànjian yuèliang ma?

you see the moon

'Do you see the moon?'

(3) when the definiteness can be inferred from life contexts.

28. qǐng zǒudao ménkou lái.

please walk to door

'Please come to the door.'

(4) when the definiteness can be determined by linguistic contexts:

a. nouns with modifiers which have superlative constructions:

29. (a) *shùxué shi wo zùi xǐhuan de gongke*
math be I most like course
'Math is the course which I like best.'

b. nouns with restrictive modifiers:

29. (b) *zhè jiu shi nǐ zúotian mǎi de shu*
this be you yesterday buy book
'This is the book you bought yesterday.'

29. (c) *Wáng San shi wǒmen xuéxiào de xiàozhǎng*
be our school principal
'Wang San is the principal of our school.'

c. nouns whose definiteness can be inferred from some other noun(s) in the same sentence or previous sentence(s). For example, the unique reference of *xuexiao* 'school' can be inferred from the context and should be understood as *Wang San yizhi zai shang de nage xuexiao* 'the school that Wang San had been attending.'

29. (d) Wang San bu shou xiaogui
NEG observe school regulations
bei xuexiao kaichu le
school dismissed
'Wang San was dismissed because he did not observe
school regulations.'

(5) when a noun is used in an abstract sense

30. nǐ yào bu yao dúshu?
you want not want study book
'Do you want to study?'

In brief, the definite marker is not constantly (or obligatorily) present, and the rules for its distribution are difficult to formulate because we need to refer to stretches of discourse longer than the sentence and to nonlinguistic context.[8]

In spite of many difficulties involved in determining the conditioning factors that underlie the question of the presence or absence of the so-called definite and indefinite markers, the notions of definiteness and indefiniteness must be recognized, as can be seen from the above examples. Unfortunately, we still know very little about which categories of nouns possess a definite vs. indefinite distinction. We also know very little about another important question: if there are categories of nouns that possess such a distinction, is this distinction obligatory or optional? In other words, is the definite/nondefinite distinction mandatory for some Chinese nouns as number and tense are in English, or is it like time expressions in English that are used only when the speaker feels like it?

2.2. Determinatives that exclude definite and indefinite markers

To answer our first question, we must first find out which determinatives are mutually exclusive with the definite marker *nà* and the indefinite marker *yǒu*. So far as surface structure is concerned, the indefinite marker may be *you* + NUP before the main verb and NUP after the main verb.[9] This indefinite 'marker' and the following determinatives are mutually exclusive with the definite marker *nà*:

(a) The deictic markers *nà* and *zhè*, which, as I have mentioned, imply definite reference

(b) The numeral marker *dì*

(c) Specializing determiners: *shàng* 'above, upper,' *xià* 'lower,' *qián* 'front,' *hòu* 'back, behind' are mutually exclusive with *nà* or *you* in ___ NUP + N. But *shàng*, *xià*, etc.

can be regarded as contractions with the definite marker in this position. (See 1.4.)

2.3. Nouns that take no definite or indefinite marker

Next we need to know which types of nouns do not take any definite or indefinite marker.

(a) Proper nouns and pronouns take no definite or indefinite marker. The yǒu and nà in the following (a's) should be derived through a deletion transformation from (b's).

31. (a) jintian yǒuge Wáng xiansheng lái zhǎo ni
today Mr. come see you
'A (certain) Mr. Wang came to see you today.'

(b) jintian yǒuge jiào Wáng xiansheng de rén lai
today call Mr. man come
zhǎo nǐ
see you
'A man called Mr. Wang came to see you today.'

32. (a) wǒ rènshi de nàwei Wáng xiansheng shi bù chouyan de
I know that Mr. be not smoke
'That Mr. Wang I know of does not smoke.'

(b) wǒ rènshi de nàwei jiào Wáng xiansheng de rén shi bù
I know that call Mr. man be not

chouyen *de*

smoke

'The man whom I know who is called Mr. Wang does not smoke.'

The *nà*'s that precede the pronouns in the following (a's) should be regarded as deictic markers in apposition in the (b's). (Compare 34a, b with 34a', b'.)[10]

33. (a) *wǒ* *pian* *bu* *bǎ* *nàge* *Wáng* *San* *dàilai*

I stubbornly not that bring

'I stubbornly did not bring (that) Wang San here.'

(b) *wǒ* *pian* *bu* *bǎ* *Wáng* *San* *nàge* *ren* *dàilai*

I stubbornly not that man bring over here

'I stubbornly did not bring (that) Wang San here.'

34. (a) *Zhang* *San* *lái* *le*, *Lǐ* *Sì* *ye* *lái* *le*, *zhǐyǒu* *nàge*

come also come only that

lǎo *Wáng* *hái* *bu* *lái*

old still not come

'Zhang San has come; Li Si has also come. Only that Old Wang has not come yet.'

(b) *Zhang* *San* *lái* *le*, *Lǐ* *Sì* *ye* *lái* *le*, *zhǐyǒu* *lao* *Wáng*

only

nàge ren hái bu lái
that man still

'Zhang San has come. Li Si has also come. Only Old Wang, that man, has not come yet.'

34. (a') Yìdalì kǔa le, Déguo ye kǔa le, zhǐyǒu zhè
Italy defeat Germany only this

ge Rìben hai bu kěn tóuxiáng
Japan still not willing surrender

'Italy was defeated and so was Germany. Only Japan (this country) was not willing to surrender.'

(b') Yìdalì kǔa le, Déguo ye kǔa le, zhǐyǒu Rìben
Italy defeat Germany also defeat only Japan

zhège gúojia hai bu kěn tóuxiáng
this country still not willing surrender

'Italy was defeated and so was Germany. Only Japan, this country, was not willing to surrender.'

The following ta 'he' should be regarded as a common noun rather than a pronoun, as can be seen from the translation.

35. (a) ta de nàge ta hen shuài
her that he very handsome

'That boy friend of hers is very handsome.'

(b) Nouns with generic reference do not take any definite or indefinite marker.

Generic nouns may be marked with either *sǔoyoude* 'all' or *fánshi* 'all.' When *fánshi* is chosen for an object, the noun phrase must be placed before the verb, and the adverb of totality *dou* or a totality word like *qúanbu* before the predicate.

36. (a) *fánshi niǎo* *dou néng fei*
all bird all can fly
'All birds can fly,' or 'So long as it is a bird, it can fly.'

(b) *fánshi niǎo* $\left\{\begin{matrix}\text{quán}\\ \underline{\text{dàbufen}}\end{matrix}\right\}$ *dou néng fei*

$\left\{\begin{matrix}\text{All}\\ \text{Most}\end{matrix}\right\}$ birds can fly.

(c) *fanshi xiaoshuo ta dou xihuan du*
novel he like read
'He likes to read (any kind of) novels.'

(d) *ta fanshi xiaoshuo dou xihuan du*
'He likes to read (any kind of) novels.'

When *sǔoyoude* 'all' is chosen for an object, transposition of the noun phrase is not obligatory. But when it is transposed, the adverb of totality or a totality word is required.

37. (a) *wǒ* *tǎoyan* *sǔoyoude* *zhěngkè*

I dislike all politician

'I dislike all politicians.'

(b) *sǔoyoude* *zhèngkè* *wǒ* *dou* *tǎoyan*

all politician I all dislike

'I dislike all of the politicians.'

But generic nouns are usually unmarked, unless their generic character is emphasized, as in sentences (36) and (37).

38. *gǒu* *de* *zhìlì* *bi* *hóuzi* *gao*

dog intelligence monkey high

'The intelligence of a dog is higher than that of a monkey.'

In the Base, genericness is marked with Gnr (B11), which is mutually exclusive with UNV^a. (UNV^a will be explained later.)

Gnr is expanded into *sǔoyoude* 'all' or null; *fánshi* is derived from *súoyoude*.

A noun plus a preceding *yǒu* *yizhǒng* 'a kind of' is not considered a generic noun.

39. *yǒu* *yi* *zhǒng* *yu* *huì* *fadiàn*

have one kind fish can generate electricity

'There is a kind of fish that generates electricity.'

We do not know which other categories of nouns fail to take definite or indefinite markers; it seems reasonable, however, to assume that all countable nouns (nouns that take individual measures, or classifiers Mc) can take them. This does not exclude the possibility of allowing uncountable nouns to take a definite or indefinite marker.

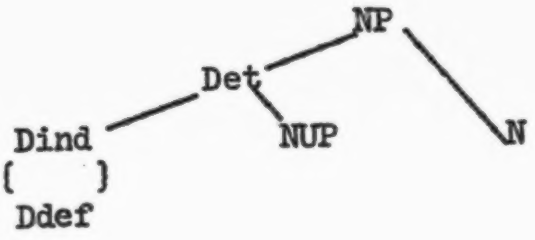
40. (a) wǒ bu xǐhuan tade nà zhong měi
I not like her that kind beauty
'I do not like her kind of beauty.'

(b) ta shenshang de nà zhong chòuwèi zhen nánshòu
he body that kind smell real hard tolerate
'It is hard to tolerate that kind of smell on his body.'

(c) yǒu yixie ní zhan zai wǒ shenshang le
some mud stick on I body
'Some mud stuck to my body.'

2.4. Are definiteness and indefiniteness mandatory in Chinese?[11]

Definiteness and indefiniteness do not seem to be mandatory for Chinese nouns. This means that definiteness and indefiniteness are marked only when the speaker finds it necessary. These categories are not like English tense and number, which must always be marked, but like English or Chinese time and locative expressions, which are specified only when it is necessary to make them explicit. One may argue that one can determine whether a noun is definite or indefinite in most cases, and hence definiteness and indefiniteness should be obligatorily marked in the Base, the markers then being optionally deleted through transformations. To do this we must be able to write rules to determine the deletions of these markers, which are introduced as obligatory adjuncts to at least some nouns, as shown below.



But this can be done only when a numeral phrase is chosen for a noun, as in the following examples, where definite and indefinite reference are unambiguous.

41a) wo mai le yiben shu

I buy one book

'I bought a book.'

41b) wo mai le yixie shu

I buy some book

I bought some books.

42. wǒ mǎi le nà $\left\{\begin{array}{l}\text{(yi)ben}\\ \text{(yi)xie}\end{array}\right\}$ shu[12]

I bought that book.

'I bought those books.'

43. yǒu $\left\{\begin{array}{l}\text{yíge}\\ \text{yìxie}\end{array}\right\}$ rén lái le

A person has come.

'Some persons have come.'

44. nà $\left\{\begin{array}{l}\text{yíge}\\ \text{yìxie}\end{array}\right\}$ rén lái le

That person has come.

'Those persons have come.'

In cases where no numeral phrase is chosen for a noun, a very large context or even the life context is needed to determine definiteness and indefiniteness. Hence the nouns in the above sentences would be ambiguous in this respect, if the numeral phrase were not present.

Here are examples in which nouns are unmarked.

45. (a) *wǒ* *xiǎng* *xiě* *xìn*

I want write letter

'I want to write a/the letter.'

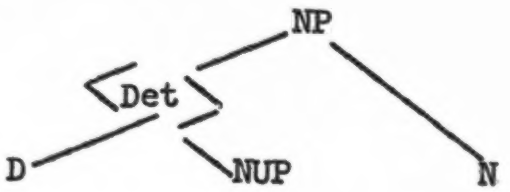
(b) *ta* *xìn* *xiě* *wan* *yǐhou* *jiu* *lái* *jiàn* *ni*

he letter write finish after come see you

'He will come to see you after he finishes writing the/a letter.'

Though there is a tendency for the *xìn* 'letter' in (45a) to be indefinite and that in (45b) to be definite, the opposite is entirely possible in both cases. If a numeral phrase is inserted without a definite marker, then the nouns in the above can be understood only as indefinite.

In view of this, I propose the following phrase structure for Chinese noun phrases. (Details are omitted.)



Determiners (D, including deictic, definite, indefinite, and ordinal numeral markers) are obligatorily chosen with a numeral phrase (NUP); Det [D+NUP] is optionally chosen for a noun.[13] (I am not sure whether we should let all kinds of nouns take Det optionally or let some kinds of nouns take Det obligatorily and prohibit all other kinds from taking a Det. The question is too general to discuss here.)

2.5. Number

It is safe to say that number is an optional category for Chinese nouns. The only reservation needed in this connection is that when a noun takes a measure word, a definite marker, or a deictic, number is obligatory. This is so because *D+N or *M+N without a numeral is ungrammatical.

46. (a) shu pò le
book break
'The book has become ragged.'
(b) *běn shu pò le
(c) *nà shu pò le

The notion of a binary distinction in number, singular vs. plural, can be observed in determinatives in which the numerals are absent when they are used either as an attribute to or as a substitute for nouns.

47. (a) zhè yiben shu pò le ---→
the one book break
'This book has become ragged.'
(a') zhè ben shu pò le ---→

(a") zhè ben pò le

'This has become ragged.'

(b) zhè lǐangben shu pò le --->

two

(b') zhèxie ben shu pò le --->

these

(b") zhèxie pò le

'These have become ragged.'

(c) zhè sanben shu pò le --->

three

(c') zhè xie ben shu pò le --->

these

(c") zhèxie pò le

'These have become ragged.'

It seems proper to show this distinction by deriving D+Mc and D+xie+Mc from $D+NU_1+M$ and $D+NU_2+M$, respectively (where NU_1 stands for yi 'one' and NU_2 for a numeral greater than one). However, this does not exclude the introduction of yi xie 'some' in the Base for two reasons:

(1) Some nouns cannot take D+NU+Mc, but may take D+yi xie.

48a) zhexie nitu ↩'this (some) mud' | yixie nitu 'some mud'
b) zhexie fen ↩'this (some) powder' | yixie fen 'some powder'

48. (c) *_zhexie_ _ge_ _nitu_ *_yixie_ _ge_ _nitu_
these mud

(d) *_zhexie_ _ge_ _fen_ *_yixie_ _ge_ _fen_
powder

These nouns are mass nouns. Therefore we need _yixie_ 'some,' _jige_ 'several,' etc., for mass nouns in the Base.

(2) It is rather counterintuitive to say that all cases of _zhexie_ _ben_ _shu_ 'these books,' _naxiege_ _ren_ 'those people,' etc., are derived from D+NU+Mc+N (where NU is greater than one), and never vice versa. There are cases in which _zhexie_ 'these' and _naxie_ 'those' are used as substitutes for D+NU+M+N, and it is only in these cases that such a derivation is appropriate. Moreover, we need a transformation for pronumeralization. There are also cases, to be sure, where a speaker uses _zhexie_ or _naxie_ in the very beginning without any idea of a specific number, except that he is quite sure that the nouns in question are plural.[14]

Unless my observation that in some cases _yixie_ 'some,' _jige_ 'several,' etc., are used prior to any specified numeral is regarded as irrelevant in transformational analysis, there is no reason to exclude such words from the Base. Hence, according to my solution, _zhexie_ _shu_ 'these books' may have two sources:

(1) _zhè_ _sanben_ _shu_, etc. ⟶ *_zhè_ _yixie_ _ben_ _shu_ ⟶

$$\left\{\begin{array}{l}\underline{\text{zhèxie}}\ \underline{\text{ben}}\ \underline{\text{shu}}\\ \underline{\text{zhè}}\ \underline{\text{yixie}}\ \underline{\text{shu}}\end{array}\right\} \dashrightarrow \underline{\text{zhèxie}}\ \underline{\text{shu}},\ \text{and}$$

(2) **zhè* *yixie* *ben* *shu* --→ *zhèxie* *ben* *shu* --→
zhè *yixie* *shu*

zhèxie *shu*

zhèxie from source (1) is a substitute for a numeral; *zhèxie* from source (2) is purely a deictic marker plus a plural marker, and nothing else.

The question of whether *yixie* 'several' as a plural pronumeral for countable nouns should appear in the Base is closely related to the question of whether pronouns like *I*, *you*, and *he* should appear in the Base. If *I, you*, etc., should be derived transformationally on the grounds that they must be identical in reference with some human nouns (e.g. The doctor said to the boy, "Could you show me your hand?"), and should be derived from the latter (plus first, second, and third person, which should be generated from the Base) to show this relationship, then the pronumerals under discussion should have no place in the Base either. If, on the other hand, pronouns are introduced in the Base, without showing their relation to other nouns, on any grounds, then the pronumeral should be introduced likewise, for consistency's sake.

3. Scope

Here we shall be concerned with the part of the determinative which I call scope (SCP).

3.1. Scope in contrast with universe

At first glance, one may be puzzled as to how the two bracketed expressions in each of the following sentences are related to each other and to the rest of the sentence:

49. (a) [báwei kèren] zhǐ láile [sanwei]
eight guest only come three
'Out of the eight guests only three came.'

(b) [nà bazhi qianbǐ] ta yi dǎduàn le [sanzhi]
that eight pencil he break three
'Of the eight pencils he broke three.'

(c) [ta zuotian diu de na baben shu] wo
he yesterday lose that eight book I
jiǎnle [wǔben]
find five
'Of the eight books he lost yesterday, I found five.'

(d) [quán jia rén] zhǐ you [zhè sange ren]
all family person only this three person
pà ta
afraid he

'Among the whole family, only these three persons are afraid of him.'

To regard what precedes the verb as the subject and what follows the verb as the object is out of the question, since in (49a, b, c) the first bracketed expressions have no such relationship with the second ones as denoted by the verbs. Moreover, (d) would be left unsolvable, since the two bracketed nominal expressions both precede the verb.

One may propose to derive (a-d) through conjoining transformations, regarding the first bracketed expressions as the potential subjects (or objects in the case of (b) and (c)) and the second ones as the actual subjects (or objects in the case of (b) and (c)). This solution may render a unified structure to each of the sentences as a whole, but it fails in a significant way, since it does not show the relationships between the first and second bracketed expressions satisfactorily. (See 3.7. for discussion of other alternatives.)

How the first and the second expressions are related to each other can be seen from the following:

(1) All the first expressions denote a quantity that is greater than that of the second, and interchanging the two would make the sentences nonsensical (probably ungrammatical).

(2) The classifier (e.g. wei, the honorific classifier for human beings) in the first bracketed expressions is usually identical with that in the second expressions. Where it is not identical, it is a group measure, such as qun 'group' or ban 'class,' which denote a unit including more members than what is denoted by the measure word in the second bracketed expressions.

(3) When BA[15] is used for (49b), the most natural way of arranging the sentence is to put the first expression immediately after BA, the second expression remaining after the verb.

49' (b) ta ba [nà bazhǐ qianbi] dǎduàn le [sanzhi]
he that eight pencil break three

Ignoring the second expression, the sentence is in accordance with the general arrangement of BA-sentences: Subject+BA+Object+verb.[16]

(4) When passive BEI[17] is used in (49b) and (c), the passive marker BEI can be placed after the first bracketed expressions; the second ones remain after the verbs.

49" (b) [na bazhi qianbi] bei ta daduan le [sanzhi]
eight pencil he break three

(c) ta zúotian diu de nà baben shu gei ta jiǎn le wǔben
lose eight book he find five

Disregarding the second expressions, the two sentences have the general pattern of passive sentences: object+BEI + subject+verb. It is obvious from the behavior of the first expressions in the pretransitive and passive sentences that these expressions should not be regarded as adverbial in the Base, but as subject or object.

(5) If (a, b, c) are changed into the negative, the second expressions have to be transposed before the verbs and after the first bracketed expressions.[18]

50. (a) [báwei kèren] zhǐ yǒu [sanwei] méiyou lái
eight guest only three not come
'Only three of the eight guests did not come.'

(b) [nà bazhi qianbǐ] yǒu [sanzhi] ta méi dǎduàn
that eight pencil three he not break
'Of the eight pencils he did not break three.'

(c) [ta zúotian diu de nà baben shu] you [wǔben]
he yesterday lose that eight book five
wǒ méi jiǎndao

(6) If the adverb zhǐ 'only' is absent (a, b, c) can be rewritten as follows. Here the first expressions appear like MOD's to the second ones, for they are connected to the latter by de.

51. (a) [nà bawei kèren] de [sanwei] lái le
that eight guest three come
'Out of those eight guests three have come already.'

(b) ta dǎduàn [nà bazhi qianbǐ] dangzhong de [sanzhi]
he break eight pencil three
'He broke three of those eight pencils.'

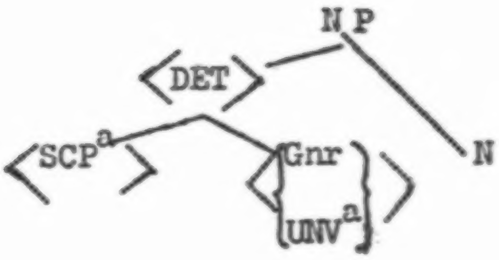
(c) wǒ jiǎn le [ta zúotian diu de nà baben shu] de
I find he yesterday lose eight book
[wǔben]
five
'Of the eight books he lost yesterday, I found five.'

(7) The first expressions denote wholes of which the second expressions are parts. The second ones denote that part of the whole which is relevant in what is denoted by the verbs. Since the first bracketed expressions denote the wholes, they must always be definite; the second ones may be definite (d) or indefinite (a, b, c) in reference.

From what has been observed above, it would surely be misleading to say either that only the first bracketed expressions (i.e. the wholes) are the subjects (or the objects in the case of (b) and (c)) or that only the second ones (i.e. the parts) are the subjects (or the object in case of (b) and (c)) in the sentence.[19] In spite of the frequent discontinuity, the whole together with the part should be regarded as a unit, or a constituent functioning as subject (or object in the case of (b) and (c)) in the deep structure.

To discuss how the whole and the part may behave in a sentence will be my chief concern in the remainder of this chapter. To avoid too many complications, I shall limit my discussion to cases in which the whole and the part share the same noun. Cases in which the whole and the part do not share the same noun will be discussed briefly in 3.7. This does not mean, of course, that the whole and the part with different nouns are insignificant or irrelevant to our present problem. On the contrary, they must be investigated before any satisfactory solution can be found for our problem. Our avoiding the discussion of such important cases is motivated by convenience of presentation.

Since the whole and the part share the same noun under our present discussion, it is quite proper to derive them as a part of the determinative in a noun phrase. In other words, we shall derive the second expressions in (49) from the scope (SCP), signifying the part, and the first expression minus the noun from the universe (UNV), signifying the whole, as presented in the following:



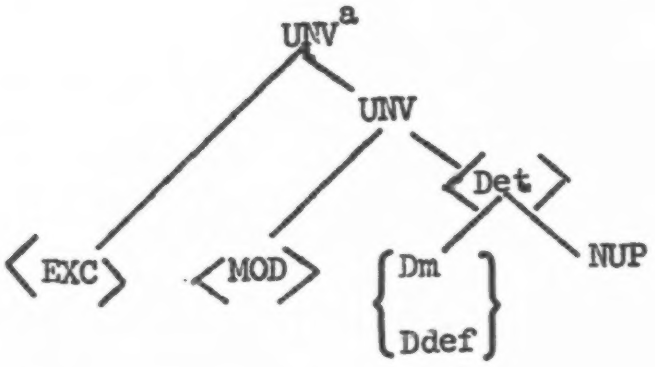
It will be noted as we proceed that the above arrangement for the structure of NP is motivated by simplicity for the transformations which rearrange its members. In spite of the general opinion that word order is comparatively fixed in Chinese, there is a certain amount of freedom in arrangement of UNV and SCP in the sentence (if we ignore the topic-comment or described-describing relation).

Generally speaking, if NP is the object, UNV^{a} + N may be transposed before the verbs or the subject. If NP is the subject, the SCP^{a} may be shifted after the N or after the verb in the derived string.

3.2. The structure of the universe and scope

3.2.1. Universe

The UNV^{a} is expanded as follows:



The excluding adverbial (EXC, *chule* ... *yiwai* 'except, besides') may cooccur with a definite (45), but not with a generic noun. That is why Gnr is alternatively chosen with UNV^a instead of UNV (B11).

52. *chúle Wáng San yǐwài de nà shíge rén dou qu le*
that ten person all go
'All ten persons went, but not (and not counting) Wang San.'

Generic nouns may or may not be marked. As mentioned above, Gnr has two terms, *fánshi* 'all' and zero in the Base. From *fánshi* can be derived its free alternant *súoyǒude* 'all.'

53. (a) *fánshi* / *suoyoude* *rén dou you lǐxìng*
'All men have reasons.'

The choice of *fánshi* (or sǔoyǒude) as an alternative to zero can be regarded as emphasis on genericness. *Fanshi* could be made an optional term, rather than an alternative term with zero. This would lead to an interpretation that all unmarked nouns in the Base are generic, an interpretation which may result in difficulty.

Any noun taking a restrictive modifier is not regarded as generic, though it may take fánshi or sǔoyǒude. In this case, the fánshi or sǔoyǒude is regarded as emphasis on the totality of the noun with a restricted modifier, and will be introduced through a transformation.

53. (b) fánshi zài chàng de ren quán dou kàndao zhège qíjí
all at people all see this miracle
'All the people who were present saw this miracle.'

The restrictive modifier may be absent (understood).[20] The definite marker with a following NUP may be deleted when a restrictive modifier is present (e.g. (29)).

To denote the whole (or the universe), the determiner needs to be a deictic marker (Dm, na 'that,' zhe 'this') or a definite marker (Ddef, na 'the'). And even if there is no such marker in the surface realization, it should be understood that such markers exist in the deep structure.

54. (a) (zhe) shige zai chuan li de ren si le sange
the ten in boat person die three

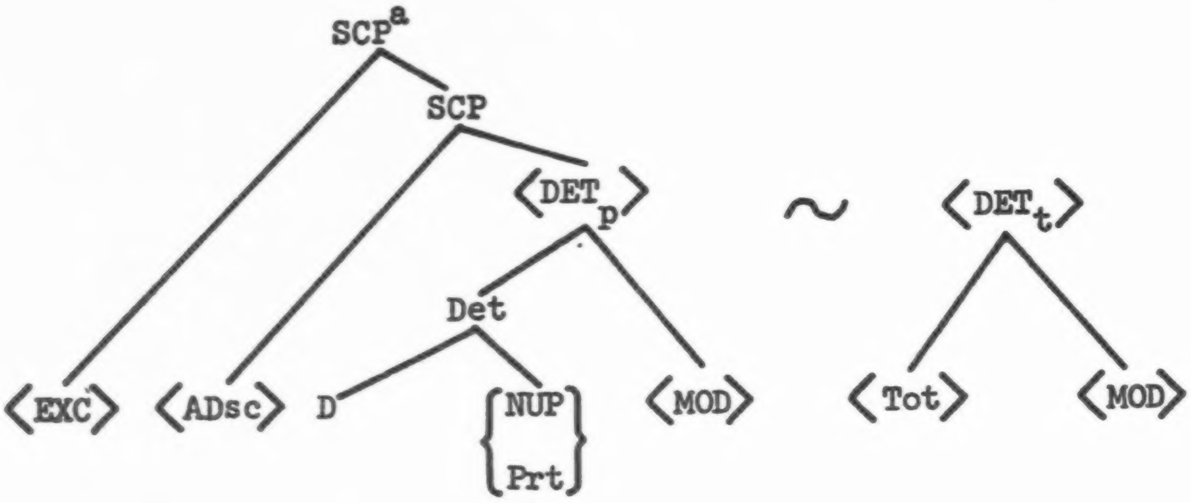
'Three of these ten persons in the boat died.'

(b) zai chuan li de (na) shige ren si le sange

'Three of the ten persons in the boat died.'

3.2.2. Scope

The SCP^{a} is expanded as



An excluding adverbial in the SCP is different from one in the UNV, though their components are similar, and though only one EXC is possible in a noun phrase.

55. (a) na shige ren chule Wang San yiwai quan dou qu le
that ten person except all go
'All the ten persons went except Wang San.'

In (52) ten persons went; in (55), nine persons went. We regard the excluding adverbial in (52) as a limiting modifier to the universe and that in (55) as one to the scope. Unlike the EXC in (52), that in (55a) can also be placed before the subject (or, more exactly, the determiner denoting the universe plus the noun) (55b), and at the end of the sentence (55c) without changing in meaning. Notice that when it is placed before *nà shíge rén* 'those ten persons,' no *de* is present as in (52).

55. (b) *chúle Wáng San yiwai, nà shíge rén quán dou qù le*
'Except Wang San all of those ten persons went.'
(c) *nà shíge rén dou qù le, chúle Wáng San yǐwai*
'All those ten persons went except Wang San.'

The main part of SCP may be either a determiner denoting totality (DET_t) or a determiner denoting partitivity (DET_p). The main reason for this division is that the former takes the adverb of scope (ADscp) *dou*, while the latter may take *zhi* 'only' as its adverb of Scope.

3.3. Determinative for totality

All the determinatives for totality (Tot) except *quánbù* and *tongtong* 'all' take the adverb of scope *dou* 'all' obligatorily. The *dou* here rarely has any meaning when totality words are present (i.e. not deleted).

$$\text{56. } \textit{nàxie} \ \textit{xuésheng} \left\{ \begin{array}{l} \textit{meiyi} + \text{M} \\ (\text{M} + \text{M}) \\ \textit{quanbu} \\ (\textit{tongtong}) \\ \textit{dàbùfen} \\ \textit{rènhé} \ \textit{yi} + \text{M} \\ (\textit{wúlùn} \ \textit{nǎyi} + \text{M}) \\ (\textit{meiyou} \ \textit{bu}) \end{array} \right\} \textit{dou} \ \textit{lái} \ \textit{le}$$

M = classifier

$$\text{'Those students } \left\{ \begin{array}{l} \text{every} \\ \text{all} \\ \text{(all)} \\ \text{most, or majority} \\ \text{any} \\ \text{(no matter which)} \\ \text{(no matter which)} \end{array} \right\} \text{ all came.'}$$

quánbù and its synonym *tongtong* may or may not take *dou*, and *dou* alone can be used instead of *quánbù* *dou* or *quánbù*, without difference in meaning.

It is clear that *dou* can be introduced through a transformation on the strength of the constituent Tot. Then *quánbù* (and *tongtong*) can be optionally deleted on the strength of *dou*. In this way *dou* need not be present in the Base.

Besides deriving *tongtong* from *quánbù* 'all,' we can derive *wúlùn nǎyi* + M 'no matter which' from *renhe yi* + M 'any' and reduplication of measure (M + M) from *meiyi* + M 'every + M' (e.g. *meiyiben* -- *běnběn* 'every *běn*'), since the pairs are synonymous.

The double negative used for emphasis upon the arbitrary sense of 'any' or 'each without exception' can be derived from *renhe yi* + M + *dou* (c). Here one of the negative markers goes with the SCP, and the other goes with the verb. Notice that no *dou* is allowed in a double negative construction.

57. (a) *tushuguan li de renhe yiben shu ta dou kanguo le*
library in any one book he all read
'He has read whichever book is in the library.'

(b) *tushuguan li wulun nǎyiben shu ta dou kanguo le*
library whichever book
'He has read whichever book is in the library.'

(c) *tushuguan li meiyou yibenshu ta mei kanguo*
no one book he not read
'There is no single book in the library that he has not read.'

58. (a) *wode shu renhe yiben dou hen you jiazhi*
my book any one all very valuable

'All my books are very valuable.'

(b) wode shu wulun nǎyiben dou hen you jiazhi
whichever one
'Whichever book I have is very valuable.'

(c) wode shu meiyou yiben mei you jiazhi
no one not
'None of my books is valueless.'

Since a verb can be negated in the Base, it is possible, after double negation is derived from the Tot renhe yi + M + dou, for a string to have three negative markers.

A double negative plus the negative marker which is given by the Base to go with the verb will not be grammatical until the two negative markers accompanying the verb are cancelled. (Cf. double negative in English.)

59. (a) renhe ren dou buken qu
any people all not willing go
'Everybody is not willing to go.'

(b) *meiyou yige ren bu buken qu
no one person not not willing go
'*Nobody is not unwilling to go.'

(c) méiyou yíge rén kěn qù.
no one willing go
'No one is willing to go.'

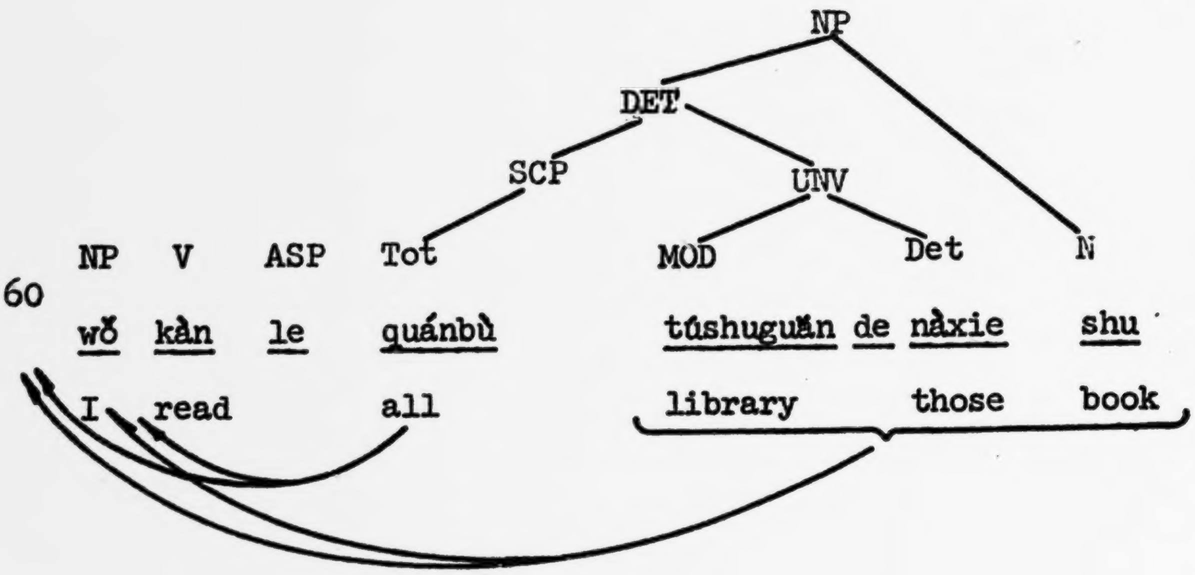
3.3.1. Totality Determinative (DET_t) in an Object

In (57) the totality expressions occur in the object, whereas in (58) they occur in the subject. The question of the position of objects that contain totality expressions will concern us in the following paragraphs. We shall examine how totality expressions are placed before the verb (A), and then after the verb (B).

A. With a few exceptions, the object with a totality determinative should be placed before the verb, either before the subject or after it (which may be preceded or followed by a time word).

(1) Where a Det is chosen as part of the universe, the Tot is generally put after the noun head or after the subject. In the latter case the whole noun phrase is separated by the subject.

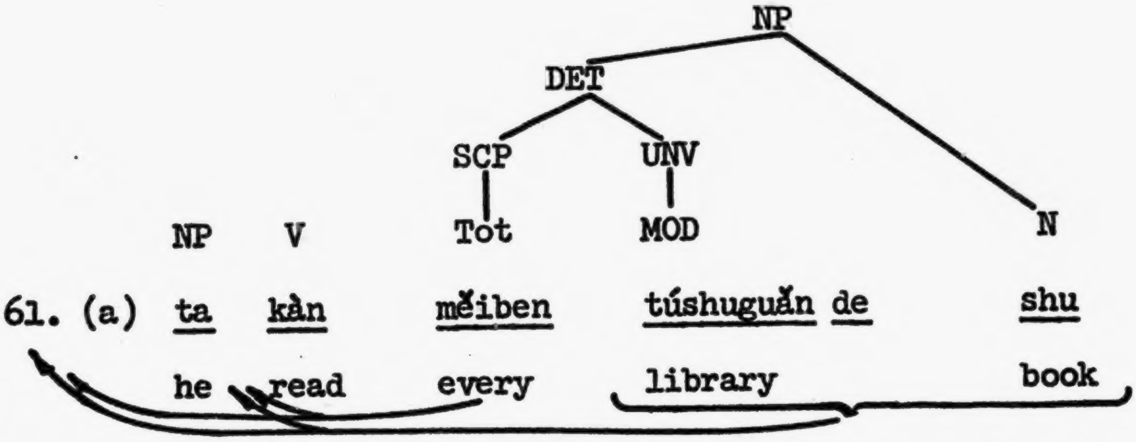
60


NP
DET
SCP
UNV
NP
V
ASP
Tot
MOD
Det
N
wǒ
kàn
le
quánbù
túshuguǎn
de
nàxie
shu
I
read
all
library
those
book

Since SCP normally does not precede UNV, the arrangement *SCP Subject UNV V ASP should be excluded. This will mean that if SCP precedes wo, the subject in the above, UNV must also precede wo.

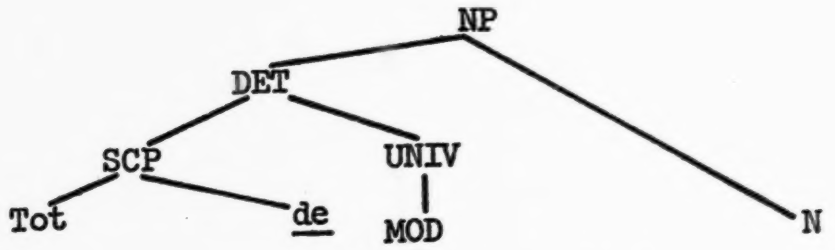
When quánbù 'all,' etc. is chosen, fánshi, or sǔoyoude can be used for emphasis on the totality, and quánbù can be deleted, so that fánshi or sǔoyoude, together with the obligatorily introduced dou, signifies totality without quánbù.

(2) Where a Det is not chosen as part of the universe, Tot may be placed in three positions: a) before the head noun of the object; b) after it before the subject; c) before the verb.



61. (a) ta kàn měiben túshuguǎn de shu
he read every library book

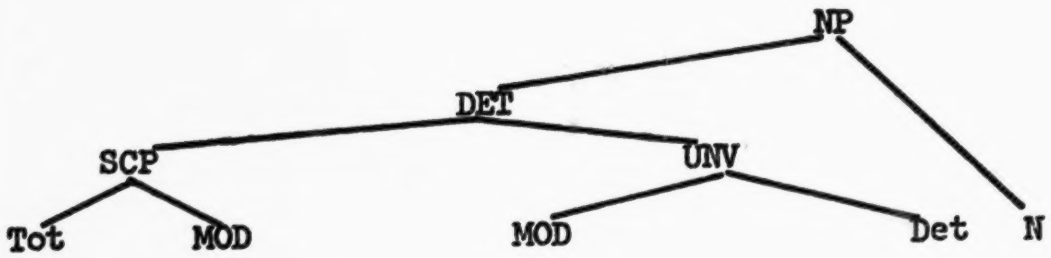
In case the Tot is quánbù 'all' or dàbufen 'most,' its position in the derived string has another possibility, i.e. before the UNV, or in the order which appears in the Base. There may be an insertion of de.



61. (b) {quánbù de / tabufen de} tushuguan li de shu

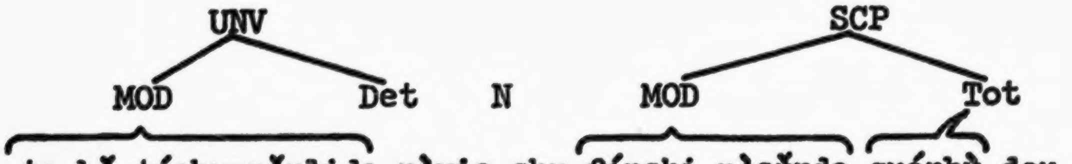
SCP preceding UNV, however, is very rare and is probably limited to postverbal position.

(3) When a MOD is chosen as part of SCP, this MOD can be regarded as that part of the determinative which constitutes the secondary universe to which Tot is the scope; i.e. Tot is the scope qualifier of the sphere set up by the MOD (which is a restrictive modifier to the UNV), rather than that of UNV directly. But a more linguistically oriented interpretation of the meaning of the two categories, Tot and MOD, will be that they both describe the scope of the universe that has an actual effect on or is actually affected by the action denoted by the verb.[21]



62. quánbù pòsǔnde zai tushuquǎn li de shu
all damaged in library book

In this case the main part of the object (generally UNV + N) is placed before the subject, unless pretransitive is used before the whole object as in (62). In the latter case the order is



63. (a) ta bǎ túshuquǎnlide nàxie shu fánshi pòsǔnde quánbù dou tiao chulai le
he library in those book damaged all pick out

'He picked out all the damaged books in the library.'

When the subject is placed after the main part of the object, it has two possible positions: before MOD or before Tot. When it is placed before the MOD, BA can be used. When it is before the Tot, fánshi or sǔoyǒu can be added before MOD.

63. (a) *túshuguǎn li de nàxie shu ta ba pòsǔn de quán dou*
library in those book he damaged all
tiao chulai le
pick out
'Among those books in the library, he picked out all the damaged ones.'

(b) *túshuguǎn li de nàxie shu* $\left\{\begin{matrix}\textit{fánshi}\\ \textit{sǔoyou}\end{matrix}\right\}$ *pòsǔn de ta quán dou tiao chulai le*
'Among those books in the library, he picked out all the damaged ones.'

B. An object with Tot may remain after the verb when SCP does not dominate a MOD, and when Tot is *rènhé* 'any,' *quánbǔ* 'all,' or *dàbǔfen* 'most.' When an object remains in this position, no *dou* can be introduced on the strength of the Tot. In this position *sǔoyoude* can be used in place of *quánbǔ* without change of meaning.

It should be mentioned here that an object with a Tot is apt to have its main part (i.e. UNV + N) transposed before the verb. Both the following sentences sound somewhat Western-flavored. The Tot can be put after the UNV or after the head noun.

64. (a) *ta dúguo túshuguǎn li de* *quánbùde* / *renhe yiben* / *dabùfende* *shu*
read

'He has read all the books / every book / most of the books in the library.'

(b) *ta duguo tushuguan li de naxie shu de* *quanbu* / *renhe yiben* / *dabufen*

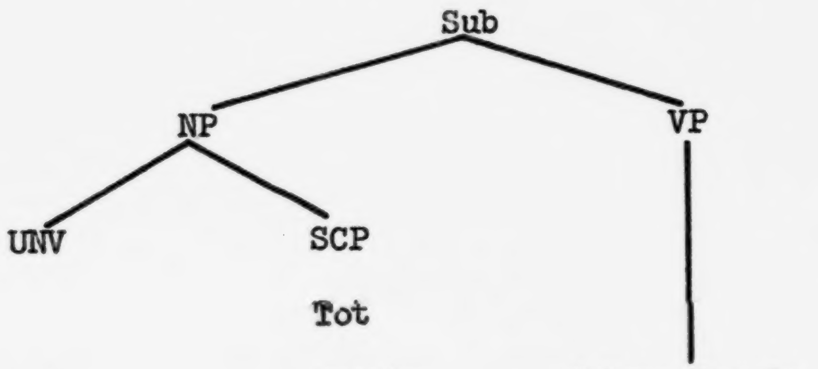
'He has read all the books / every book / most of the books in the library.'

Since *meiyou* ... *bu* 'no ... not,' *wulun na yi* + M 'whichever,' *tongtong* 'all,' etc., which are derived from *renhe yi* + M 'any,' etc., do not occur after a verb, these transforms should be avoided in this position. The best way to achieve this seems to be to put the T-rule for deriving these transforms after the T-rule that transposes the object before the verb.

3.3.2. Totality determinative in a subject

Since a subject generally occurs before the verb, its position in the sentence is less complicated than in the case of objects.

The elements of a noun phrase chosen as the subject of a sentence have among themselves an order similar to that of the elements of an object. The UNV and SCP in a noun phrase used as the subject may also be separated by other elements (chiefly time and place expressions).



na shige ren quanbu chiguo fan le

those ten people all have eaten

Unlike the partitive SCP, which can be separated from the UNV by the main verb, a totality SCP in a noun phrase functioning as the subject must always remain before the verb.

3.3.3. Negation of totality

Negation of totality has to be recognized if we want to account for the following pairs.

65. (a) tamen méiyou quánbù lái

they no all come

'Not all of them came.' ('Some came.')

(b) tamen quánbù méiyou lái

'All of them did not come.' ('None of them came.')

66. (a) *tamen* *bù* *dou* *yào* *lái*
they not all want come
'Not all of them want to come.'

(b) *tamen* *dou* *bù* *yào* *lái*
no want
'All of them do not want to come.' (i.e. want not to come.)

Negation of the totality should be taken as denoting 'not all'(but some), whereas negation of the verb or auxiliary should mean a complete non-action of the subject or object.

It should be noted that the negative marker here may also be subject to morphophonemic change in the presence of the aspect marker (ASP).[22]

It should also be mentioned that although most of the Tot's can be negated, none of the partitive can be negated, unless the negated partitive is *yi* + M 'one + M,' or unless the scope occupies the whole predicate.

67. (a) *nàxie* *ren* *méiyou* { *měige* *dou* / *dabufen* *dou* / *henduo* } yao lai

'Not every one of these people wants to come.'
" most " " " want " "

'Not many of these people want to come.'

(b) **nàxie* ren meiyou wuge yao lai

those people not five want come

The negation of totality means non-totality, but the negation of a partitive other than one does not mean totality. As can be seen from (67a) and the following example, the negation of a partitive must occupy the whole predicate, and the rest of the sentence must be nominalized.

67. (c) *naxie* *ren* *lai* *de* *meiyou* *wuge*

those people come no have five

'Among those people not more than five came.'

'Not more than five of those people came.'

(d) *nàxie* *ren* *lai* *de* *bu* *shi* *zhe* *wuge*

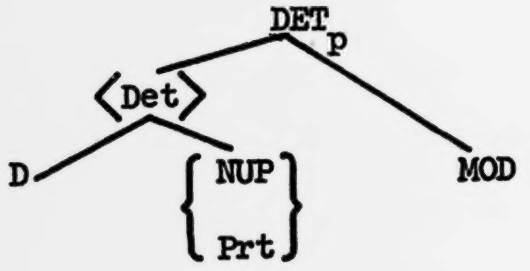
Neg be

'Among those people, those who came are not these five.'

In fact, as has been mentioned, the first negative marker in (57c), (58c), and (59c) is derived from the double negation of totality and can be regarded as a bearer of emphasis on *mei* 'every' or *renhe* 'any.' A number greater than one is impossible in the context seen in (57c), (58c), and (59c). We shall soon discuss in greater detail the relationship between negation of totality, partitive, and the verb.

3.4. Determinative for partitive (DET$_p$)

In the Base DET$_p$ is expanded as follows:

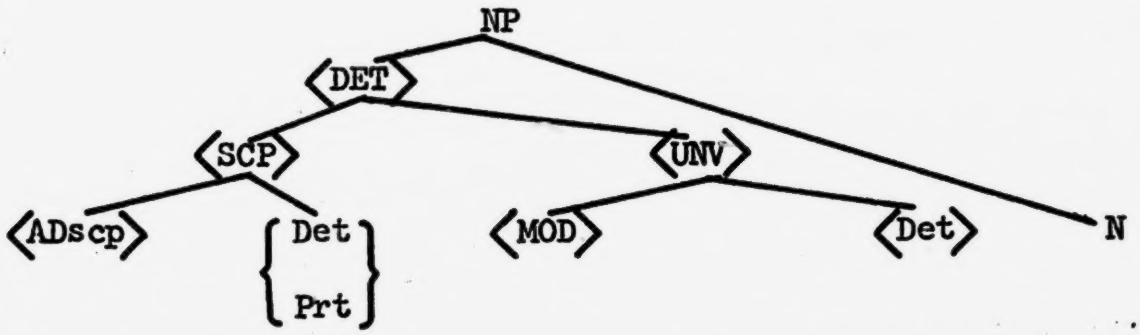


where partitive (Prt) includes shǎobùfen 'a small part,' yíbùfen 'a part,' fraction (FRC)[23] etc. and determinant (D), yǒu 'some,' dì '-th,' zhè 'this,' nà 'that.'

3.4.1. DET$_p$ in the object

The positions of DET$_p$ are even more variable than those of DET$_t$ (determinative for totality). Again we will be concerned first with the positions of elements of a noun phrase functioning as the object.

A. When a Det is chosen for the UNV of an object noun phrase with a determiner for partitive (DET$_p$), there is a tendency to split the noun phrase into two parts, UNV + N on the one hand, which is shifted to precede the subject, and SCP on the other, which may remain after the verb (68b) or be transposed before the verb (c)[24] or the subject (d).



68. (a)	zhǐ	yibufen jǐběn	túshuguǎnlide	nàxie	shu
	only	a part several	library in	those	book

(b)	túshuguǎn li de nàxie shu wo zhǐ kànguo	xiǎobùfen yìxie yíbàn sanben
	read	
	Among those books in the library I read only	a small part some half of them three

(c)	túshuguǎn li de nàxie shu wǒ zhǐ yǒu	xiǎobùfen yixie yiban sanběn	kànguo

68. (d) $$\text{túshuguǎn li de nàxie shu zhǐ yǒu}\left\{\begin{array}{l}\text{xiǎobùfen}\\ \text{yìxie}\\ \text{yíbàn}\\ \text{sanběn}\end{array}\right\}\text{wo kànguo}$$

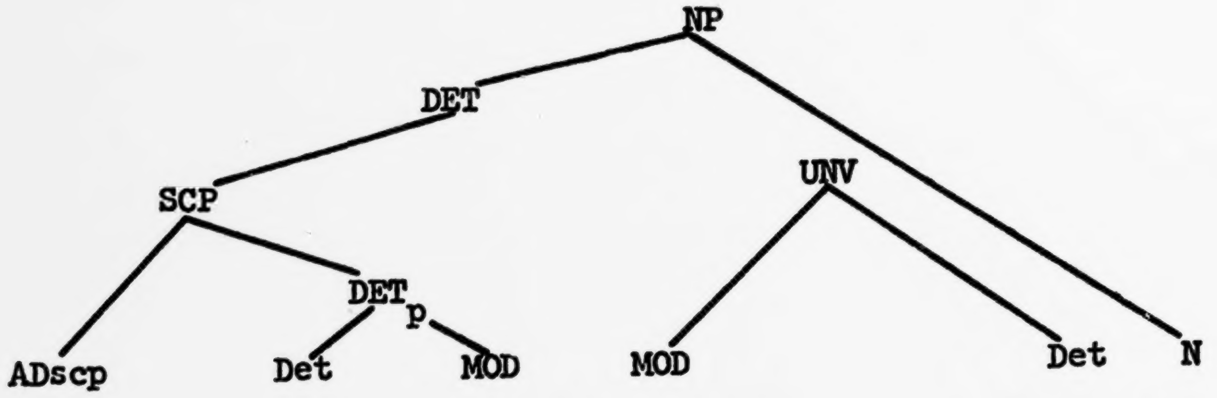
But all these elements except ADscp may remain after the verb without being separated by external elements.

(e) $$\text{wǒ zhǐ kànguo}\left\{\begin{array}{l}\text{xiǎobùfen}\\ \text{sanben}\end{array}\right\}\text{túshuguǎn li de nàxie shu}$$

$$\text{'I only read}\left\{\begin{array}{l}\text{a small part}\\ \text{three}\end{array}\right\}\text{of the books in the library.'}$$

(f) $$\text{wǒ zhǐ kànguo túshuguǎn li de nàxie shu de}\left\{\begin{array}{l}\text{xiǎobùfen}\\ \text{yìxie}\\ \text{yíbàn}\\ \text{sanběn}\end{array}\right\}$$

In (f) the whole noun phrase is also divided by de into two parts, the order of which is still UNV + N de DET_p. It can be understood that by most grammarians whose chief interest is in the surface structure, DET_p is regarded as the head, whereas the rest is taken as the attribute of the nominal construction. (See 3.7.3. for a discussion of this alternative.)



zhǐ sanben pòsǔnde zúotian zai nàxie shu

only three damaged yesterday at those book

69. zhuozishang de

desk above

Here Det and MOD should be regarded as two qualifiers describing the SCP. But the two may or may not refer to the same set of objects. The two usually go together in the given order. (For a discussion of whether a MOD should be a part of UNV or SCP see 3.6.5.). In this case UNV + N is usually placed before the subject, and the two elements of DET_p, Det_p and MOD, may be shifted before the verb or even the subject.

70. (a) zúotian zai zhuozishang de nàxie shu wo zhǐ

yesterday on the desk those book I only

xiubǔ $\begin{Bmatrix}\text{sanben}\\ \text{yíbùfen}\end{Bmatrix}$ pòsǔn de

repair $\begin{Bmatrix}\text{three}\\ \text{a few}\end{Bmatrix}$ damaged

'I repaired only $\left\{\begin{matrix}\text{three}\\ \text{a few}\end{matrix}\right\}$ damaged books among those which were on the desk yesterday.'

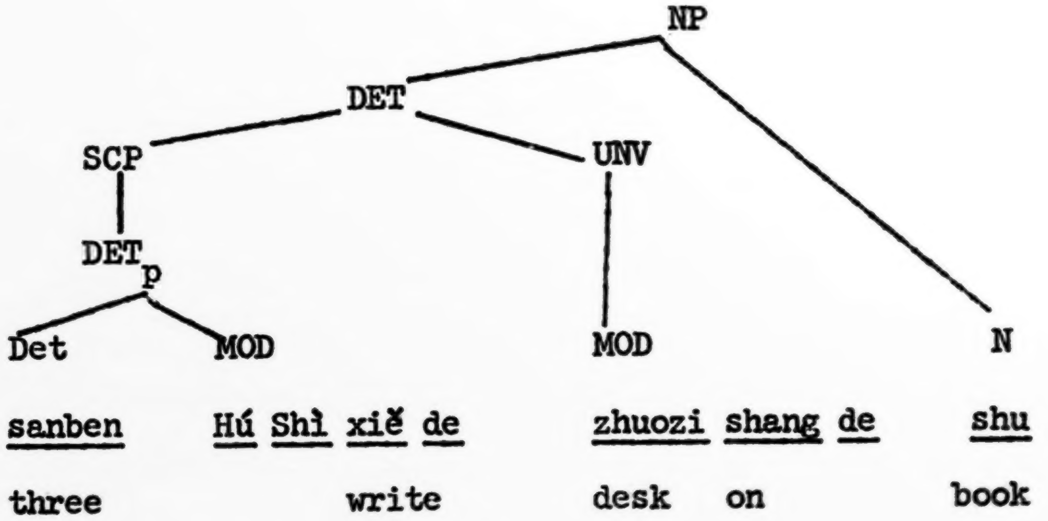
70. (b) zúotian zai zhuozishang de nàxie shu wo bǎ pòsǔn de zhǐ xiubǔ le $\left\{\begin{matrix}\text{sanben}\\ \text{yíbùfen}\end{matrix}\right\}$

'Among the books which were on the desk yesterday I repaired $\left\{\begin{matrix}\text{three}\\ \text{a few}\end{matrix}\right\}$ of the damaged books.'

(c) zúotian zai zhuozishang de nàxie shu pòsǔn de wo zhǐ xiubǔ le $\left\{\begin{matrix}\text{sanben}\\ \text{yíbùfen}\end{matrix}\right\}$

'Among the books which were on the desk yesterday I repaired $\left\{\begin{matrix}\text{three}\\ \text{a few}\end{matrix}\right\}$ of the damaged ones.'

B. When no determiner is chosen for the universe of an object noun phrase no transposition is necessary, unless UNV and SCP each dominate a MOD.


NP
DET
SCP
UNV
DET$_p$
Det
MOD
MOD
N
sanben
Hú Shì xiě de
zhuozi shang de
shu
three
write
desk
on
book

71. zhuozi shang de shu wo dú le sanben Hú Shì xiě de
desk on book I read three write
'Among the books on the desk I read three written by Hu Shi.'

If there is one MOD in a terminal string and no discontinuity in NP, we are confronted with the problem of determining to which the MOD is to be attached, UNV or SCP.

72. (a) shu wo zhǐ mǎi le sanben Hú Shì xiě de
book I only buy three write
'As to books, I bought only three written by Hu Shi.'

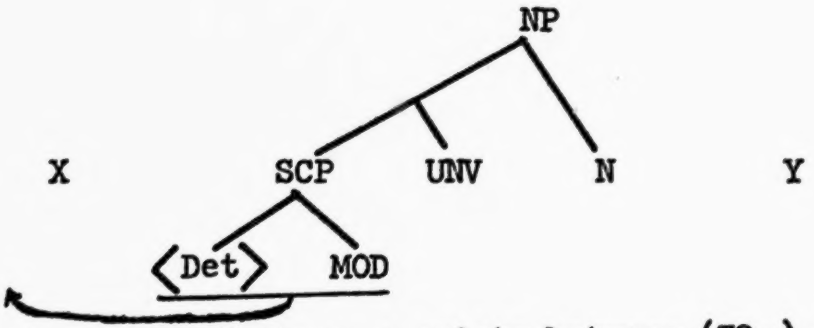
(b) Hú Shì xiě de shu wo zhǐ mǎi le sanben
write book I only buy three
'As to books written by Hu Shi, I bought only three.'

(c) wǒ zhǐ mǎi le sanben Hú Shì xiě de shu
'I only bought three books written by Hu Shi.'

That Hu Shi xie de 'written by Hu Shi' in (a) is a part of the SCP is obvious, for the topic is books and not books written by Hu Shi. A comparison of (a) and (b), where MOD is dominated by UNV, will make the point clear.

One may assign the *Hu* *Shi* *xie* *de* in (c) to UNV or SCP indifferently. Unnecessary ambiguity of this sort should be avoided by writing a grammar that will assign it uniquely to UNV.

This can be easily achieved by postulating that any SCP that dominates MOD should be separated from UNV + N.



An important difference exists between (72c) and (73).

73. *wǒ* *mǎi* *le* *Hú* *Shì* *xiě* *de* *nà* *sanben* *shu*

buy write three book

'I bought the three books written by Hu Shi.'

The *nà* *sanben* in (73) is definite, a part of UNV, whereas the *sanben* in (72c) is indefinite and part of SCP. According to (73), Hu Shi wrote only three books (which are the UNV) unless the *nà* is a deictic marker. According to (72c), *sanben* is merely a part of indefinitely many books written by Hu Shi.

The partitive scope (DET_p), especially when a definite or deictic marker is chosen, tends to occupy a more prominent position (i.e. the main predicate) in a sentence, as in the following:

74a Hú Shì xiě de shu wo mǎi de zhǐ yǒu $\left\{\begin{matrix}\text{sanben}\\ \text{nà sanben}\\ \text{zhè sanben}\\ \text{jǐben}\\ \text{yíbùfen}\end{matrix}\right\}$

'Among the books which are written by Hu Shi there are only $\left\{\begin{matrix}\text{three}\\ \text{those three}\\ \text{these three}\\ \text{a few}\\ \text{a part}\end{matrix}\right\}$ that I bought.'

74b wo mai de Hu Shi xie de shu zhi you $\left\{\begin{matrix}\text{sanben}\\ .\\ .\\ .\end{matrix}\right\}$

'The number of books written by Hu Shi which I bought was only three.'

In both cases the DET_p only assumes the main predicate headed by the optional ADscp *zhi* 'only' and verb *you* 'have,there is/are'; and what precedes the verb *you* is a nominal functioning as the subject.

Compare (74a, b), where the numerals are the predicate, with (76a, b), where the main verb is clearly the *mai* 'buy.'

$$\text{76a}\quad \underline{\text{wo}}\ \underline{\text{zhi}}\ \underline{\text{mai}}\ \underline{\text{le}}\quad \left\{\begin{array}{l}\underline{\text{sanben}}\\ \underline{\text{na}}\ \underline{\text{sanben}}\\ \underline{\text{zhe}}\ \underline{\text{sanben}}\\ \underline{\text{na}}\ \underline{\text{jiben}}\\ \underline{\text{yibufen}}\end{array}\right\}.\quad \underline{\text{Hu}}\ \underline{\text{Shi}}\ \underline{\text{xie}}\ \underline{\text{de}}\ \underline{\text{shu}}$$

$$\text{'I bought only}\quad \left\{\begin{array}{l}\text{three}\\ \text{those three}\\ \text{these three}\\ \text{a few}\\ \text{a part}\end{array}\right\}\quad \text{of the books written by Hu Shi.'}$$

$$\text{76b}\quad \underline{\text{Hu}}\ \underline{\text{Shi}}\ \ \underline{\text{xie}}\ \underline{\text{de}}\ \underline{\text{shu}}\ \underline{\text{wo}}\ \underline{\text{zhi}}\ \underline{\text{mai}}\ \underline{\text{le}}\quad \left\{\begin{array}{l}\underline{\text{sanben}}\\ \cdot\\ \cdot\\ \cdot\end{array}\right\}$$

(The same as 70a)

How the relationship between these sentences can be indicated in our grammar is an interesting question. It is obvious that (73) and (74) are similar with respect to who bought how many of what. But it is also obvious that they are different with respect to what is being talked about and what the point of the message is.

3.4.2. DET_p in the subject

The principle that SCP and UNV + N may be separated by the main verb also holds true with the subject noun phrase, in case the verb belongs to a class of intransitive verbs which we may call momentary verbs. Verbs with this feature usually denote 'to appear,' *lái*, 'to disappear,' *qu*, 'to change from one state to another,' *huài*, *làn*, *sǐ*.

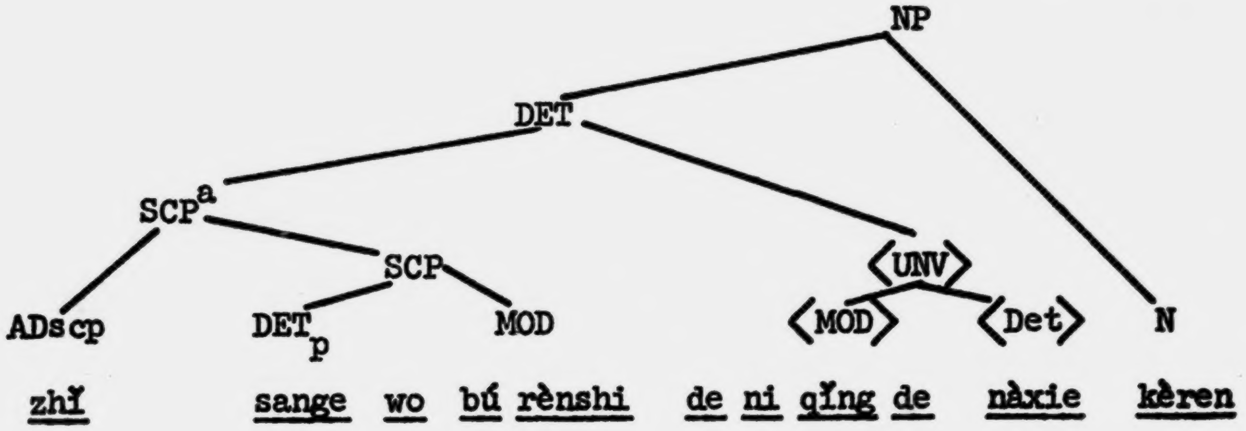
ta *qù* *le* 'He went.'

ta *sǐ* *le* 'He died.'

They are not continuous in that they do not take the progressive aspect: **tade* *qianbǐ* *zhèngzai* *duàn* *zhe* 'His pencil is breaking.' These verbs, plus the perfective aspect *le*, denote the state or quality which is a result of the effect of action denoted by the verb for their subject.

Whether such a separation is optional or obligatory is chiefly determined by what elements are chosen for the noun phrase, as in the cases of totality and in the cases of object.

A. If MOD is chosen for the SCP, its separation with UNV + N is obligatory, i.e. the SCP should be shifted either to follow the verb (77) or to precede the verb (78). The MOD and Det in UNV may be present (77b, c) or absent (77a).


NP
DET
SCP^a
SCP
ADscp
DET_p
MOD
⟨UNV⟩
⟨MOD⟩
⟨Det⟩
N
zhǐ
sange wo bú rènshi
de nǐ qǐng de
nàxie
kèren

77a kèren zhǐ lái le sange wo bú rènshi de
guest only come three I not know
'Only three of the guests unknown to me have come.'

77b nǐ qǐng de nà shíge kèren zhǐ lái le sange wo bú rènshi de
you invite ten guest
'Among the ten guests you invited only three unknown to me came.'

77c nǐ qǐng de kèren zhi lái le sange wo bú rènshi de
'Among the guests you invited only three unknown to me came.'

If the Det in SCP is definite, the two elements of SCP, Det + MOD, can permute.

77c nǐ qǐng de kèren lai le wo bú rènshi de nà sange
'Among the guests, those who came are the three unknown to me.'

Occurrence of the SCP after the verb, however, is limited to cases where the verb is not accompanied by any anxiliary verb, negative marker, or aspect marker, except le (completive) or guo (experience).

77d *kèren bu lái sange wo bu rènshi de
guest not come three I not know

77e *kèren kěn lái sange wo bu rènshi de
willing come

77f *kèren bu néng lái sange wo bu rènshi de
can come

In all these cases the SCP is placed before the verb. The UNV + N and SCP may be separated by ADscp zhǐ 'only,' a time expression, etc.

78a kèren zhí you sange wo bú rènshi de bù lái
guest only three I not know not come
'(Only) three guests whom I do not know are not coming.'
(unknown to me)

78b kèren zhǐ you sange wo bu rènshi de bu kěn lai
willing
'(Only)three guests whom I do not know are not willing to come.'

78c kèren zhǐ you sange wo bu rènshi de lái le

'(Only) three guests unknown to me came.'

Following the principle that no MOD of the SCP remains before the head noun, the MOD in the following will be regarded as part of the UNV uniquely.

79a wǒ bǔ rènshi de kèren lái le sange

'Three guests whom I do not know came.'

79b yǒu sange wo bu rènshi de kèren lai le

have

'Three guests whom I do not know came.'

B. If MOD is not chosen for SCP, DET$_p$ may occur in three positions if certain conditions are met.

80a yǒu sange wo qǐng de kèren lái le

have three I invite guest come

'Three of the guests that I have invited have come.'

80b wǒ qǐng de kèren you sange lái le

'Among the guests I invited, three have already come.'

80c wǒ qǐng de kèren lái le sange

'Among the guests I invited, three have already come.'

80d wǒ qǐng de kèren dangzhong de sange lái le

'Among the guest I invited, three have already come.'

If the DET$_p$ is before the verb and after the noun, the connecting formative may be a localizer (zhizhong, dangzhong, zhongjian, zhong, lǐ (tou) 'among, in') and/or yǒu or de. But de is impossible if the DET_p is accompanied by zhi.

The presence of ADscp, Det in the UNV, and aspect marker serves to limit the positions in which DET_p may occur. Here are three examples:

(1) Other conditions being the same, if ADscp and the aspect marker le are present, the only possible position for DET_p is after the verb.

81 wǒ qǐng de kèren zhǐ lái le sange
I invite guest only come three
'Among the guests I invited, only three have already come.'

(2) If ADscp and the aspect marker guo are present, all three positions are possible for DET_p.

(3) If Det is chosen for the UNV, DET_p cannot be put before UNV + N.

82 *zhè sange ta qǐng de nàxie kèren lái le
those

3.5. Scope adverbs and time concepts

3.5.1. Meaning of the scope adverbs

As has been stated, the category SCP denotes how large the sphere of the whole (denoted by UNV) that is relevant to the action or states denoted by the main verb (including the adjective) is.

This part-and-whole or scope-and-universe relation is accompanied by adverbs of impression on scope (ADscp), *zhǐ* 'only' and *dou* 'all,' which, in a sense, express the impression or attitude of the speaker towards such a relation. Some expressions for totality (e.g. *měige* 'every,' *rènhé* 'any') are more emphatic than others (e.g. *quán* 'all'), though they are logically equivalent. Hence *dou*, which may be considered as an emphatic on totality, is obligatory for the former and optional for, or even interchangeable with, the latter.

The distinction between Tot and Prt is linguistic (or psychological) rather than logical, since *dàbùfen* 'majority, most,' *hénduo* 'many, much' are included in Tot on the basis of the fact that they take *dou*. When *dàbufen*, *hěnduo* do not take *dou*, they behave very similarly to DET_p, since they can be placed after the verb, while the rest of the noun phrase appears before the verb. We derive these from two sources: Tot and DET_p. When they are derived from DET_p, their combination with *zhǐ* should be prevented, since

83 **wǒ* *zhǐ* *kàn* *le* *henduo*

*'I only read many,' is ungrammatical.

A partitive determiner without *zhǐ* 'only' can be regarded as an objective presentation of the relation between the whole and the part. When *zhǐ* 'only' is used, the implication is that the speaker regards the part as smaller than some implied standard or too small, in relation to what he expected.

3.5.2. Positions of *dou* and *zhǐ*

As can be seen from the examples given above, *dou* 'all' always occurs before the verb, regardless of how its associated noun is positioned. An important condition regarding the appearance of *dou* is that all other elements of the noun phrase in question should precede *dou* in the surface realization.

zhǐ may occur in two positions: immediately before the main verb if DET_p with which it is associated is placed after the main verb, BA, or BEI, and immediately before the DET_p if the DET_p occurs before the verb. In the latter case there is usually an insertion of *you* between the two elements. (Other views concerning this will be given in 3.7.4.)

Between the ADscp *dou* or *zhi* and the main verb there may be some adverbial, the BA phrase, or the BEI phrase.[25a]

3.5.3. Scope mingled with time dimension

Since verbs may be accompanied by aspect markers and time adverbs, it is to be expected that time conceptions can be introduced in the whole-part relationship.

In the following, *zhǐ* 'only' and *yǐjing* 'already' are almost antonyms.

84a *kèren zhǐ lái le sange*[25b]

guest only come three

'Only three of the guests have come.'

84b *kèren yǐjing lái le sange*

already

'Three of the guests have come already.'

zhǐ indicates that the scope is too small; *yǐjing* implies that the scope is greater than what has been or what could have been expected.[26] But *yǐjing* is basically a time expression, and it can cooccur with *zhǐ* or *dou*.

85a *kèren yǐjing lái de zhǐyou sange*

guest already come only three

'Only three of the guests have come already.'

85b *kèren yǐjing dou lái le*

all

'All of the guests have already come.'

The antonym of *yǐjing*, *hái* 'again, re-':

86a *kèren you sange hai yao lái*

still

'There are still three other guests coming.'

has scope reference when it is combined with the negative (b), since such a sentence is equivalent to one that has DET_p modified by excluding the adverb hái 'still, besides'[27] (c).

86b kèren you sange hai méi lái
still not
'Three of the guests have not come yet.'

86c kèren hai you sange méi lái
'Three of the guests have not come yet.

As a matter of fact, the cooccurrence of the hai 'again, re-' and hai 'still' is redundant, and one of them must be deleted for the sentence to be grammatical.

3.5.4. Chains of wholes and parts

In this section we shall discuss the universe-scope relationship in contrast with a chain of wholes and parts. Consider the following four sentences.

87a [zai tushuguan li] you [shiwan ben] shu
A a
in the library have 100,000 book
'There are 100,000 books in the library.'

87b zhe shiwan ben shu dangzhong you [wuqian ben] shi
b
among 5,000 be

[yong zhongwen xie de]
B
Chinese written in

'Among these 100,000 books are 5,000 copies written in Chinese.'

(c) zhe wuqian ben shu dangzhong you [yibai ben] shi [youguan
c C
yufa de].

'Among these 5,000 books are 100 copies about grammar.'

(d) zhe yibai ben shu dangzhong you [sanben] shi [zui zhuyao zui
d D
three most important and
rongyidong de]
D cont'd
easiest understand

'Among these 100 books these are three copies which are most important and easiest to read.'

When more than one of these five sentences are put into a noun phrase, we have a chain of wholes and parts.

88a [ta] xiang kankan tushuguan li de na shiwan ben shu

'He wants to see the 100,000 books in the library.'

88b ta xiang kankan tushuguan li de yong zhongwen xie de na wuqian ben shu

'He wants to see the 5,000 books which are in the library and written in Chinese.'

In (88c)[28] we have all four sentences (87a-d) put into one noun phrase. (In the following presentation there should be de after each occurrence of A.)

88c ta xiang kankan A + B + C + D + na + d + shu

'He wants to read the three books which are in the library, written in Chinese, about grammar, most important and easy to read.'

Notice that the chain is not broken (i.e. not separated by elements outside the NP), and the numeral phrase is concomitant with D, which is the most restrictive modifier, that is, the description of the smallest set. It is to be expected that the set referred to by the numerals, a, b, c, d, and the set referred to by the relative clauses A, B, C, D may have different kinds of relations, i.e. they may (e.g. (c) or may not (e.g. A + d + N tushuguan li de sanben shu 'three books in the library') describe the same set of objects.

Here are some remarks about such an unbroken chain.

(1) Not more than one numeral phrase is possible. All the rest should be deleted.

89a A + B + C + c + N

(zai tushuguan li de, yong zhongwen xie de, youguan yufa de yibai ben shu)

(The 100 books which are in the library, written in Chinese, and about grammar)

89b *A + a + B + C + c + N

(*zai tushuguan li de shiwan ben yong zhongwen xie de, youguan yufa de yibai ben shu)

It may be argued that (b) is not acceptable because it is too long. The argument is certainly not valid, since we have (c), which is shorter than (a), and yet is not grammatical.

89c *a + A + b + N

*shiwan ben tushuguan li de wuqianwan ben shu

We do have

a + A + N + de + b

shiwan ben tushuguan li de shu de wuqian ben

5000 books $\left\{\begin{array}{l}\text{out of}\\ \text{in}\end{array}\right\}$ the 100,000 books of the library

But this is a case of a chain of wholes and parts broken into two parts, UNV and SCP.

UNV [a + A + de + N] + de + SCP [b]

(2) The numeral phrase should be concomitant with the most restricted modifier that precedes the head noun (i.e. describing the same set as is described by the latter)

(i) (See reasons for this in (3)) or one indicating a quantity less than the most restricted modifier.

If the numeral phrase denotes a quantity smaller than that of the most restricted modifier, the numeral phrase will be a restrictive qualifier (i), rather than a concomitant one. Compare the translations for (i) and (ii).

(i)	b + A + B + N	'the 5,000 books which are in the library and written in Chinese'
(ii)	c + A + B + N	'100 of the books which are in the library written in Chinese'

Since (i) and (ii) are identical in linear presentation (NUP + MOD + N), ambiguity arises as to whether NUP gives concomitant (or supplementary) description with the MOD or a restrictive qualification to the MOD.[29] (Henceforth we shall use the terms coordination or concomitance for (i), and subordination or non-concomitance for (ii)[30].)

a)	A + a + N	'the 10,000 books in the library'
b)	A + b + N	'5,000 books of the books in the library'

c) *A + a + B + N ⇒

c') A + a + N + dangzhong + de + B

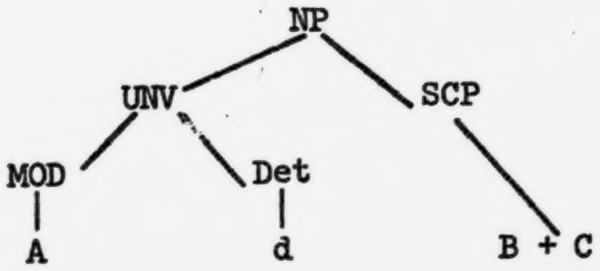
those of the 100,000 books in the library that are written in Chinese

d) *A + a + B + C + N

d') A + a + N + dangzhong + de + B + C

those of the 100,000 books in the library that are written in Chinese and about grammar

But we feel that there is a split in NP(c) and (d), and the deep structures should be



instead of a chain of wholes and parts.

(3a) Since the numeral phrase is always the one for the most restrictive modifier, the numeral phrase, unless it takes the definite marker, can be shifted to any other position within the noun phrase, except after the head noun, without affecting the meaning.

A + B + C + D + d + N ⇒ d + A + B + C + D + N ⇒
A + B + C + d + D + N ⇒ A + d + B + C + D + N ⇒
A + B + d + C + D + N

Though there is a tendency for a numeral phrase with a deictic marker to head the noun phrase, this does not seem to be a rule. There are cases in which Det [Dm + NMP] do not shift together. Such a numeral phrase usually takes an additional definite marker. Hence, Dm + MOD + Ddef + NMP + N should be understood as a transform of MOD + Dm + NMP + N.

zhuozi shang de $\begin{bmatrix}\text{nà}\\ \text{zhe}\end{bmatrix}$ wuben shu ⇒ $\begin{bmatrix}\text{nà}\\ \text{zhe}\end{bmatrix}$ xie zhuozi

shang de nà wuben shu

'$\begin{Bmatrix}\text{those}\\ \text{these}\end{Bmatrix}$ five books on

the desk'

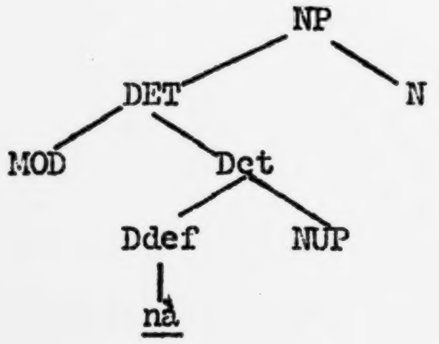
3(b) The numeral phrase with the definite marker (Ddef) should always be placed immediately before the head noun, and the definite marker can be deleted without affecting the reference, if Ddef + NUP + N is the topic of a sentence. Hence the Ddef + NUP in MOD + Ddef + NUP + N can only be a concomitant qualifier with the MOD, and can never have any independent restrictive function. To be sure, it is the MOD that is the restrictive modifier.

A numeral phrase denoting a quantity smaller than the most restricted modifier never takes the definite marker. This amounts to regarding the nà attached to such a numeral phrase uniquely as

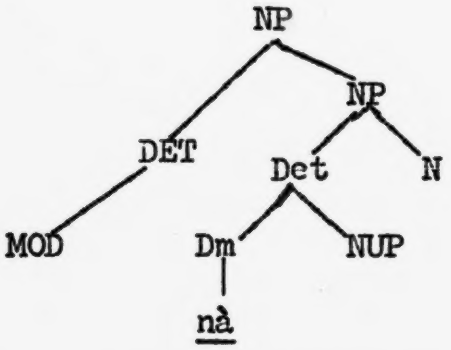
Dm. This interpretation is reasonable because the phrase nà + NUP is the most restrictive in the DET, and the MOD is merely descriptive.

Since nà can be the indefinite marker (Ddef) or a deictic marker (Dm), this amounts to saying that MOD + nà + NUP + N is ambiguous only in two ways, (a) or (b).

(a)



(b)



The indefinite marker is always deleted unless Det [Dind + NUP] appears at the very beginning of a noun phrase and the noun phrase appears before the predicate. Furthermore, since a numeral phrase may have the definite marker deleted, ambiguity exists in MOD + NUP + N: it may be (i) C + c + N 'the 100 books written on grammar, etc.' or (ii) C + d + N 'three of the books written on grammar, etc.'

(4) The order A + B + C + D should be maintained to indicate the intended sequence of wholes and parts. B + A + N may mean either that B is the whole and A is the part, or that

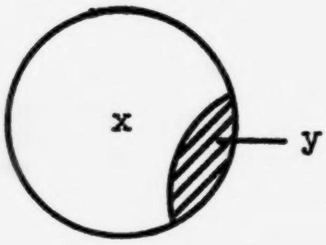
B and A are in coordination. (Cf. the two conjoined modifiers in *zuizhongyao* 'most important' and *zuirongyidude* 'easiest to read,' conjoined by *er* 'and, at the same time,' where the conjunction makes it impossible to interpret one of the two modifiers as subordinated.)

So far as reference is concerned, the following three expressions may be identical, since x, y, and z are idential.

a) *zai tushuguan li de yong zhongwen xie de shu*

x y

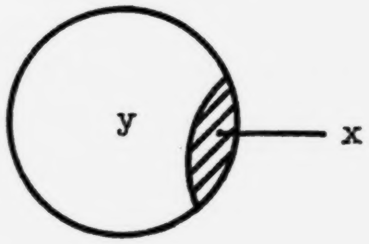
'the books in the library that are written in Chinese.'



b) *yong zhongwen xie de zai tushuguan li de shu*

y x

'the books written in Chinese that are in the library'



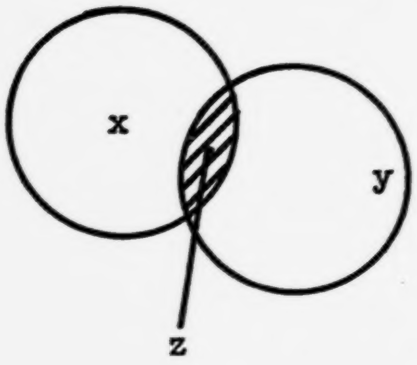
c) zai tushuguan li de yong zhongwen xie de shu

x y

---

z

'the books that are in the library and written in Chinese.'



In (a) reference is made to all the books in the library (x), and then the books written in Chinese that are in the library (y). In (b) it is just the opposite: 'the books that are written in Chinese (y) are first mentioned and then the books in the library among those books (x). It seems to me that interpretations like (c) rarely occur in the minds of Chinese speakers. (See Introduction for another interpretation.)

(5) The most restricted modifier(s) with its (their) numerical qualifier, if there is (are) any, can be placed after the head noun. This will give the impression that the post-head-noun elements are added as afterthoughts.

The following three sentences mean the same thing:

a) wo kan le A + b + B + shu

b) wo kan le A + shu + b + B

c) wo kan le A + b + shu + B

'I saw the 6000 books written in Chinese that are in the library.'

Unbroken chains are rather rare, however, especially when they are long. When such a chain is broken into two parts, each of the two in contrast to the other, there may be a chain of wholes and parts within each part. Hence in a noun phrase there may be two chains of wholes and parts, each of which is independently subject to the restrictions and variations stated above.

a) A + B + b + N   wo du le d + C + D
I read

b) b + A + B + N   wo du le C + d + D

c) A + N + b + B   wo du le C + d + D

etc.

Here are some additional remarks on such broken chains.

(6) For one noun phrase there should be no more than one head noun appearing in the actual sentence. The chain for UNV usually has a head noun, and its repetition in the chain for

SCP is not allowed.

In contrast to English, which may have 'the three books of the five books,' Chinese does not allow ***wuben* *shu* *de* *sanben* *shu*. This does not mean that we should not postulate two head nouns in the same noun phrase. The fact that the head can occur with any MOD or Det as shown in (5) above suggests that we could postulate a noun for *each* MOD and Det in the deep structure. Notice that in (2) above we postulate a head noun to account for the set of objects referred to by different MOD and Det in the same noun phrase.

(7) If no head noun follows a SCP isolated from the rest of NP, no numeral phrase can be placed at the end of the SCP unless it is definite. If MOD + Ddef + NUP occurs, the numeral phrase should be concomitant or in coordination with the modifier.

A + B + b + N *wo* *du* *le* C + D + Ddef + d
*A + B + b + N *wo* *du* *le* C + Ddef + d

(8) When there are outside elements between universe and scope, the numeral phrase in each part is shiftable only inside its own part: change of position across the cut is impossible.

*A + B *wo du le* b + C + D

*A + B + c *wo du le* C + D

(9) If both UNV and SCP have a numeral phrase, each of the definite markers in UNV + N may be deleted. But such a deletion is limited to cases where the MOD and the Det are in coordination. Hence the *zai nar de yiqian ben shu* in the following should be understood as definite, and the two qualifiers as concomitant (or in coordination).

zài nàr de yìqian ben shu pòle wŭbăi ben

at there 1,000 book damage 500

'Of the 1,000 books over there, 500 copies are damaged.'

In a BA-sentence, if a chain of wholes and parts is the object, it may be interposed by outside elements at two places; in one place by the subject and BA, and in the other by the verb.

A + N *wǒ bǎ* c + B + C *dú le* d + D

'I read the three most important and easy ones out of the Chinese grammar books which are in the library.'

But here we have reasons to put c + B + C with A + N under UNV, instead of putting it with d + D under SCP:

(1) c + B + C should always be definite. (The noun after *ba* is always definite.)

(2) When the portion of the NP after bǎ has a numeral, it is very unlikely for the portion preceding it to have another numeral. But it is possible for one numeral to occur after the main verb and another before the main verb.

(3) There will be no difficulty in interpreting the numeral in c + B + C when it is put together with A. But difficulty arises when it is put together with d + D. For d + D is that part of the NP (i.e. scope) that is affected by the action denoted by the verb. Hence we can regard A + N + c + B + C as a chain of wholes and parts dominated by UNV. A merely serves to identify the UNV, c + B + C.

The alternative that a noun phrase can be divided into three elements (UNV_1 + UNV_2 + SCP, UNV + SCP_1 + SCP_2, etc.) should be rejected for the following reasons:

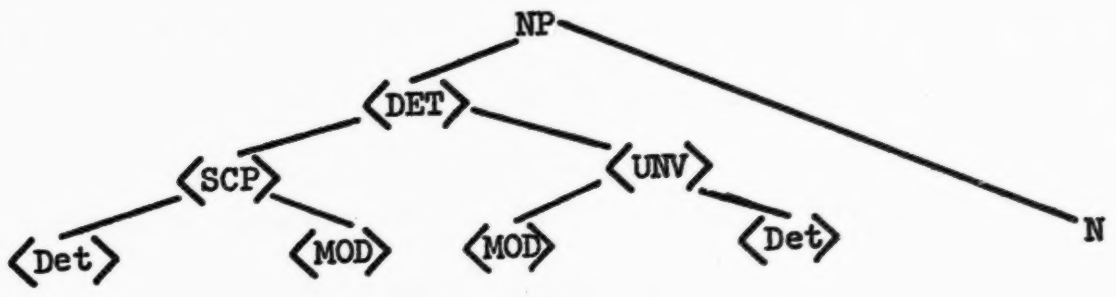
(1) Since the analysis of binary division can account for the above special case, any further complication would lose economy without gaining anything.

(2) The main focus of the interest in the above BA-sentence is what (or how many) books the speaker has read, in contrast with the whole from which he selected for reading. How this whole is identified (i.e. defined by another modifier) is of secondary interest. Since the two cuts are not of the

same nature, there is no reason to use three-way branching for the expansion of the noun phrase.

3.5.5. Summary: The positions of the elements in a noun phrase in the surface structure

Since the DET, UNV, SCP, MOD, Det, etc. (other details ignored) are all optional in the noun phrase, there are 16 combinations of Det, MOD, MOD, Det, including nonoccurrence of any of these determinatives. The following shows all such combinations. It should be mentioned that the MOD's may have mod, mod ... in coordination (i.e. conjoined restriction) or subordination (i.e. successive restriction).



1	Det	MOD	MOD	Det	N
2	Det	MOD	MOD		N
3	Det	MOD		Det	N
4	Det				N
5		MOD	MOD	Det	N
6	Det	MOD			N
7	Det		MOD		N
8	Det			Det	N
9		MOD	MOD		N
10		MOD		Det	N
11			MOD	Det	N
12	Det				N
13		MOD			N
14			MOD		N
15				Det	N
16					N

We shall now make a summary of the general rules which account for the relative positions of Det, MOD, MOD, and Det with regard to N. There are several cases (e.g. Patterns 1, 2, 3, etc. in the above) where the separation of SCP from the rest is obligatory. The following T-rules (1-3) will turn them into UNV + N + de + SCP. How the UNV + N and the SCP may be further separated by outside elements (including pause through deletion of de) will be discussed in 5.3, Universe and Topicization.

It goes without saying that our assignment of base structures and writing of permutation rules should aim at an explanation of our observations that D + NUP + MOD + N, MOD + NUP are ambiguous, and MOD + Ddef + NUP + N is not, that the expressions for universe are always definite, whereas those for scope may be definite (including dì èr ge 'the second one') or indefinite, and so forth. Besides, we should aim to avoid allowing ambiguity which is structurally or semantically unnecessary (i.e. not observable by the native user).

(1) When Det + N occurs as the whole string for an NP in the surface structure, no ambiguity is observable. Hence it seems desirable that $\left\{\begin{matrix}\text{Ddef}\\ \text{Dm}\end{matrix}\right\}$ + NUP be assigned uniquely to UNV, $\left\{\begin{matrix}\text{Dinf}\\ \text{Dord}\end{matrix}\right\}$ + NUP to SCP, and that a Det separated from N by an outside element

(i.e. N + X + Det) be assigned to SCP uniquely. Therefore, we have:

SCP [Det], N

a. If Det $= \left\{ \begin{array}{l} \text{Ddef} \\ \text{Dm} \end{array} \right\} + \text{NUP}$

obl ⇒ 2 + de, 1

b. If Det $= \left\{ \begin{array}{l} \text{Dinf} \\ \text{Dord} \end{array} \right\} + \text{NUP}$

opt ⇒ 2 + de, 1

(See Pattern 12 of the above for applicable situations.)

(2) When MOD + N of N + X + MOD occurs as the whole string of NP, no ambiguity is observable. Hence

SCP [⟨Det⟩ + MOD], UNV + N

obl ⇒ 2 + de, 1

(See Patterns 1, 2, 3, 5, 6, 9, 10, 13.)

(3) Since Det + ⟨MOD⟩ + Det + N does not occur,

Det + ⟨MOD⟩ , Det + N

obl ⇒ 2 + de, 1

(See Patterns 4, 8.)

(4) Since $\left\{ \begin{array}{l} \underline{\text{mei}} + \underline{\text{yi}} + \text{M} \\ \underline{\text{renhe}} + \text{yi} + \text{M} \end{array} \right\} + \text{MOD}$

$$\text{as well as MOD} + \left\{\begin{array}{l}\underline{\text{měi}} + \underline{\text{yi}} + \text{M}\\ \underline{\text{rènhé}} + \underline{\text{yi}} + \text{M}\end{array}\right\}$$

occur,

$$\text{SCP}\ \ [\left\{\begin{array}{c}\underline{\text{měi}}\\ \underline{\text{rènhé}}\end{array}\right\} + \text{yi} + \text{M}],\quad \text{MOD, N}$$

opt ⟹ 2, 1, 3

(See Pattern 7.)

(5) Since the following bracketed expressions are usually understood as definite,

[báwei kèren] lái le sanwei

eight guest come three

[túshuguǎn wǔwànben shu] bèi tou le yídàbàn

library 50,000 book steal

we have

UNV [X, Ddef, NUP + Y] + W + SCP

X or Y = MOD; Ddef + NUP and MOD are in coordination.

opt ⟹ 1, 3

3.6. Universe-scope in constructions other than subject and object

So far we have considered the UNV-SCP constructions which appear in the subject or in the single object. We shall discuss briefly what other kinds of noun phrases may have such two-termed constructions. What is discussed here will not be incorporated in the rules and will include cases where the UNV and SCP have different head nouns.

Besides subjects and single objects, almost any other type of NP may have UNV-SCP. But those that may be separated by other elements are limited to Time and Place, in addition to direct and indirect objects.

3.6.1. Indirect object

90a *nà* *yi* *ban* *xúesheng* *wǒ* *quán* *dou* *gěi* *le* A
that one class student I all give
'I gave A's to all students of that class.'

90b *nà* *yi* *ban* *xúesheng* *wǒ* *zhǐ* *gěi* *le* *sange* *rén* A
only three person
'I gave A's to only three students of that class.'

3.6.2. Direct object

91a *nà* *yì* *dá* *qianbǐ* *wǒ* *yǐjing* *gěi* *ta* *sanzhi* *le*
that one dozen pencil I already give he three
'I have given him three (pencils) out of that dozen (of) pencils.'

91b *nà* *yi* *dá* *qianbi* *wǒ* *yǐjing* *quán* *dou* *gěi* *ta* *le*
all

'I have given him all of the dozen (of) pencils.'

3.6.3. Place

92a xibù de dà chéngshì wǒ měige dìfang dou qùguo

West big city I every place all go

'I have been to every big city in the West.'

92b xibù de dà chéngshì wǒ zhǐ qùguo liǎngge dìfang

only two

'I have only been to two of the big cities in the West.'

Here the SCP needs to have a noun. But since repetition of the same noun in a sentence of UNV and SCP is taboo, a general noun dìfang 'place' is preferred. This cannot be generated from the P-rules suggested above. Hence if the present rules are not revised, the difang 'place' must be introduced through transformation on the strength of the node Place and the Det_p.

3.6.4. Distance

93a shí gonglǐ lù wǒmen yǐjing pǎo le jiǔ gonglǐ le

ten km road we already run nine km

'We have run nine km (out) of the ten km.'

93b shí gonglǐ lù wǒmen hái pǎo bu dào yì gongli

still not one

'We ran only one km (out) of the ten km.'

3.6.5. Duration

94a yì nián sanbailiùshiwǔ tian wo cái zài waimian zhù le
one year 365 day I only at outside live
san tian
three day

'Out of 365 days in one year, I lived only three days away from home.'

94b yige xingqi de xiujia yijing wan le wu tian le
one week vacation already five day

'Out of a vacation of one week, five days have been spent fooling around.'

3.6.6. Frequency

95a na jici hui wo dou mei canjia
that several meeting I all no attend

'I did not attend any of the several meetings.'

95b nà jici hui wo zhi canjia zuihou yici
only last one

'Among those meetings, I attended only the last one.'

3.6.7. Duration of time

Duration of time can be indicated in two ways: by specifying the limit (i.e. the beginning and ending points of time), and by describing the length of time duration (in terms of time units, for example). Either way can be used for universe or scope.

a) *zuotian wo kan shu kan le sanxiaoshi*

length length

'I read for three hours yesterday.'

b) *zuotian wo cong zaoshang qidian kanshu kan dao badian*

length beginning point ending point

'Yesterday I read from 7 to 8 a.m.'

c) *cong badian dao wudian wo zhi xiuxi bange xiaoshi*

'From 8 to 5 I rested only for half an hour.'

d) " " " " " "

shier dian dao

shier dian yike

de na duan shijian

'From 8 to 5 I rested only for the period of time from 12 to 12:15.'

The portion of time for scope may be definite or indefinite; the portion of time for universe is usually definite. Occasionally universe or scope may take both ways of indicating a portion of time: by limit and by length, which in general describe the same portion of time. Compare (96a) and (c) in the following, which exemplify limit and length in apposition and (96c) and (d), which exemplify universe and scope.

96a *yinian sanbailiushiwu tian*
365 days, or a year

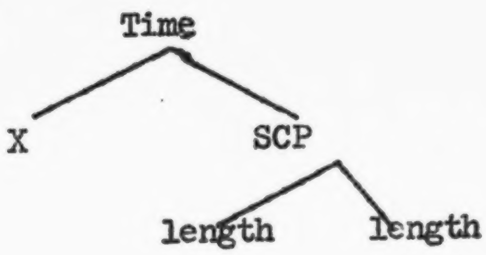
96b *zuotian wo cong jiu dian gongzuo dao shiyi dian gong zuo le liang xiao shi*
'Yesterday from 9 o'clock to 11 (I) worked two hours.'

96c 365 *tian li de san tian*
three days in 365 days

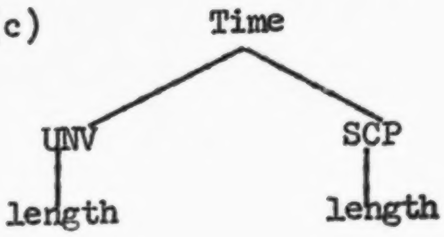
96d *cong jiu dian dao shiyi dian zhi zuo le shifenzhong*
'Between 9 and 11 (I) only worked 10 minutes.'

When two time expressions which denote the same length of time appear in a sentence, there are two kinds of possible relations between them: one concomitance (a, b) and the other universe and totality scope(c).

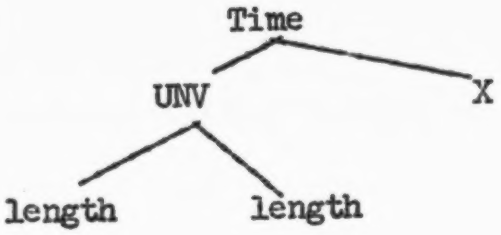
(a)


Time
X
SCP
length
length

(c)


Time
UNV
SCP
length
length

(b)


Time
UNV
X
length
length

In actual sentences UNV and SCP are generally separated by other elements, and therefore can be distinguished from apposition easily. Compare (e) and (f).

96e *qunian* *365* *ri* *ni* *dou* *zai* *gan* *shenme*?
last year day you all do what
'During the 365 days last year what were you doing all around?'

96f *qunian* *wo* *zhengzheng* *gongzuo* *le* *365* *ri*
exactly work
'Last year I worked for exactly 365 days.'

Time expressions like *shèngdàn* 'X'mas,' 1966 *nían* '1966,' *sanyue* *shiwu* *ri* 'March 15,' which are proper nouns in nature, or *jintian* 'today,' *qunián* 'last year,' etc., which are substitutes for these, often serve as the universe and durative expressions as the scope. It goes without saying that to show a whole-part relationship, the time unit in the universe should be larger than that in the scope, since the former is usually singular.

Moreover, *yìzhí* 'always,' *tongcháng* 'usually,' *shíshíkèkè* 'always' etc., may be regarded as totality scope and *yǒu shíhou* 'sometimes,' *yìhǔir* 'a while,' *hěnshǎo* 'seldom' may be included in partitive scope. The use of ADscp *dou* 'all,' *zhí* 'only' also applies here.

97a *wǒ* *jintian* *yìzhí* *dou* *hěn* *máng*
I today always all very busy

'I am very busy today all through.'

97b wǒ jintian zhǐ xiǎng gongzùo { yìhǔir / sange xiǎoshí }

only think work

'Today I wanted to work only for { a while' / three hours' }

To refer to a point or a length of time, Chinese uses a device very similar to that of many other languages. Time units are year, month, day, hour, minute, and second.[31] A point in time we express by a succession of NU_o + Mt, where NU_o is an ordinal number, and Mt is a time unit, e.g.

1932 nian 12 yue 1 ri shangwu 5 dian 53 fen 11 miao

1932 December 1st a.m. 5 o'clock 53 min. 11 sec.

For duration of time we use NU + Mt, where NU is a cardinal number, e.g. 30 nian '30 years,' 30 fen '30 minutes.' Logically, this sequence can be regarded as a chain of whole-part relationships with each term receiving singular and definite reference. (Cf. 3.5.4. Chain of Wholes and Parts.) When the chain is cut into a binary opposition of universe and scope it means that the two portions are related to each other not as a specifier of another specifier, but as a given whole and its part, whose size in proportion to the whole is of great concern. Hence with the understood and unspecified part deleted, the above sequence may appear as the time expression in (a's); but a different device is called for in deriving (b's).

98a qunián yíyùe yírì wǒmen xiuxi
last year Jan. the 1st we rest
'Last January the 1st we had a vacation.'

98b qunián wǒmen zhǐ yíyuè yírì xiuxi
only
'Last year we had a vacation only on Jan. 1.'

98c qunián wǒmen zhǐ yíyùe yírì hàn liùyùe yírì xiuxi
and June
'Last year we had a vacation only on Jan. 1 and June 1.'

98d qùnián wǒmen zhǐyou liǎngtian xiuxi
only two day
'Last year we had a vacation only on two days.'

98e qùnián wǒmen zhǐ xiuxi (yíyùe yírì hàn liùyuè yírì) liǎngtiān
only and June
'Last year we had a vacation only on two days (Jan. 1 and June 1.'

99a shàng xingqi de xingqi san wǒmen shàng le kè
last week Wednesday we class
'Our class met last Wednesday.'

99b *shàngxingqi* *wǒmen* *zhǐ* *you* *xingqisan* *shàng* *kè*

only

'Last week our class met on Wednesday only.'

99c *shàngxingqi* *wǒmen* *zhǐ* *xingqi* *san* *hàn* *xingqisi* *shàng* *le* *kè*

and Thursday

'Last week our class met on Wednesday and Thursday only.'

99d *shàngxingqi* *wǒmen* *zhǐyou* *liǎngtian* *shàng* *kè*

only two day

'Last week our class met only two days.'

99e *shàngxingqi* *wǒmen* *shàngkè* *zhǐ* *shàng* *le* (*xingqisan* *hàn* *xingqisì*) *liǎngtian*

'Last week our class met only two days (Wednesday and Thursday).'

In (b's) we have a special case of the UNV-SCP construction; both the UNV and SCP have definite and singular reference. Through conjoining of SCP's we may have (c's); and (d's), if we prefer indefiniteness to definiteness, numerical generalization to listing of specific instances.

It is worth mentioning that (e's) (without the time proper nouns in parentheses) are a more common form for (d's), and that proper time nouns can be placed after the verb only if a DUR is present in apposition.[32]

3.6.9. Restriction on occurrence of phrases bearing both UNV and SCP

It is fortunate that there is a rather strict restriction on the occurrence of phrases that have discontinuous UNV and SCP: no sentence can have more than one such phrase.

Occasionally, a sentence may have more than one phrase that has both UNV and SCP. But not more than one can be split. And very frequently the UNV of one (and only one) of these noun phrases is shifted to the beginning of the sentence and constitutes the topic of the sentence.

In spite of this restriction, *dou* may be ambiguous if there is more than one definite noun which is a candidate for UNV preceding *dou*.

100a *nàxie* *shu* *wǒmen* *dou* *dú* *le*
those book we all read
(i) 'We have read all of those books.'
(ii) 'All of us read those books.'
(iii) 'All of us read all those books.'

100b *wǒmen* *xiàwu* *dou* *méi* *kòng*
afternoon all no free time

(i) 'We do not have any spare time all the afternoon.'

(ii) 'All of us are not free in the afternoon.'

(iii) 'All of us are not free all the afternoon.'

3.6.10. Restrictions on members of SCP and UNV in different types of noun phrases

It may be universally true that the scope words used for noun phrases functioning as subject and object may not be identical with those used in time or place expressions. Thus *yíbùfen* 'a part,' *zhěngge* 'whole' will not be proper for frequency. And instead *měige* *dìfang* 'every place,' *dàochù* 'everywhere' can also be used for Place. *changchang* 'always,' *yìzhí* 'always,' *you* *shíhou* 'sometimes' can be regarded as a type of scope word in the time expression, where the universe may be unspecified.

101a (*quán* *xiao* *de* *rén*) *cóng* *xiaozhǎng* *dao* *xiàogong*
all school people from president to janitor
méiyou *yíge* *ren* *bù* *zhidao* *zhèjian* *shì* *de*
no one person no know this matter
'(Of all the people in school) From the President to the janitor there is no one that does not know this matter.'

101b *cóng* *ta* *líkai* *dao* *xiànzài* (*zhèduan* *shíjián*)
from he departure to now this period time
wǒ *méiyou* *yìtian* *bu* *xiǎng* *ta* *de*
I no one day no think he
'During the period from his departure to the present there has been no single day in which I did not miss him.'

A similarity between subject-object noun phrases and other types of noun phrases can be found in setting up the limits of the universe by the *cóng* ... *dào* 'from ... to' construction. Both may have another phrase in apposition for universe, which can be deleted in both cases. On the other hand, the scope words in noun phrases for time or place often require a head noun (usually a general noun, e.g. *shùnjian* 'moment,' *shíjian* 'time'), whereas those in subject-object noun phrases seldom take any (e.g. *rén* 'people,' *shìqing* 'matter,' *dongxi* 'thing'), since they may be identical with the head noun of the SCP.

3.7. Alternatives to the present solution

We shall now consider some alternatives to the solution of UNV and SCP as two mutually independent constituents of the determinative.

3.7.1. dou as Verbal Adverb and as Conjunction

The restrictive modifiers and deictic markers of a noun can probably be understood as a scheme for determining (defining) a set of objects denoted by the noun. In set theory this scheme is merely a substitute for another more primitive way of defining a set, namely the listing of all its members. (Subscription can be used if the members have no name.) The quantitative determinative, then, can be understood as an indication of the size of the set--an indication of how long the list of the members of the set is.

The listing method in language will be what is usually called the conjoining construction, if the members of the set are listable and are more than one. And from the above comparison it seems reasonable to assume that the determination and the conjoining of nouns are closely related.

Our problem related to this analogy is the interpretation of dou, which is regarded by some grammarians as an adverb, by others as a conjunction, and by us as an emphatic marker of totality.

The fact that dou always occurs with the predicate and that a sentence may have all elements other than dou + V deleted, but never have N + dou alone, has led to the solution that *dou* is an adjunctive to the verb rather than the noun.

In spite of the use of the term *fanwei fuci* 'scope adverb' for *dou*, *zhi*, etc., Chinese grammarians have hesitated to associate it with the noun. Most grammarians adopt the view that *dou* expresses the scope of action for the verb, rather than speak of formally characterizing the relationship between the noun and *dou*.

Of interest is the view that *dou* is a conjunction for cases where conjoined elements are nouns.

In his treatment of 'Conjoining and Deletion in Mandarin Syntax' William Wang (1964) treats *dou* as a conjunction.

This view may account for sentences like the following:

102 *Zhang San han Li Si dou qu guo le*
and all go
'Zhang San and Li Si have both been there.'

where *han* 'and,' which is widely accepted as a conjunction, is optional and *dou* obligatory.

And with some adjustment this view may also account for sentences of the following types. (In order to do so, however, one has to explain the relation between the quantitative determinative and the conjoining of nouns in a certain way.)

103a *nà shiben shu wo dou kan guo le*

that ten book I all read

'I have read those ten books already.'

103b *nà shiben shu wo quan dou mei kan guo*

all not read

'I did not read any of those ten books.'

But we must find some other source to account for a noun which is singular or uncountable, and yet has *dou*.

104a *nà yiben shu wo quanbu dou kan guo le*

that one book whole all read

'I have read the entire book already.'

104b *wo zhengge xiawu dou meiyou kong*

whole afternoon all no free

'I am not free all the afternoon.'

104c *wo yi ba pingzi li de shui dou dao chu lai le*

already bottle in water all pour out

'I have poured out all the water in the bottle.'

For it is obvious that *dou* cannot stand as a conjunction in these sentences.

Since our UNV-SCP approach does not require that the UNV + N be a plural or countable nominal, it can account for the cases like the above, and the analysis of *dou* as the scope adverb still works well.

We shall now come back to the question of how the determinative is related to the conjoining of nouns by examining how the view that dou is a marker of emphasis on totality can account for the dou which is related to the conjoining of nouns.

When nouns are listed to form a set, a restrictive determinative of the set[33] is hardly necessary, since there is no need to specify the membership by any statement as to which are the restrictive modifiers for UNV or SCP. When such a listed set is accompanied by a numeral phrase, the latter is not a determinative defining the members of the set, but an appositive, a redundant remark about the set. Therefore, it is possible to put liangben 'two M,' sange ren 'three persons' or liangyang dongxi 'two kinds of things' after the conjoined nouns in (102).[34]

An incomplete listing needs a general noun, to be sure, and the partial list should be regarded as a modifier of this noun:

105 Wang San deng shiwu ge ren
fifteen person

'the fifteen persons including (or headed by) Wang San'

Except in some limited cases, totality is implied by a complete listing, since otherwise such a listing would not be necessary. Hence dou is obligatory, whether or not the conjunction *han* 'and' appears between nouns. (See 102.)

If totality is not implied, then *dou* is never used, despite a complete listing.

106 *ni* *wo* *ta* *sange* *ren* *dangzhong* *yao* *taotai* *yige*

person among weed one

'Among you, me and him, three persons, one will be weeded out.'

107 *bushi* *ni* *jiushi* *wo* *yao* *bei* *taotai*

not be

'Either you or I will be weeded out.'

On the other hand, when SCP + Pred or SCP + V are conjoined, *dou* is never used, even when totality is denoted by such conjoining.

108a *tade* *buxia* *youde* *si* *le* *youde* *pao* *le*

his follower some die some flee

'As for his men, some died, and some fled.'

108b *tade* *buxia* *bushi* *si* *le* *bianshi* *pao* *le*

not be

'His men either died or fled.'

108c *tade* *buxia* *side* *si* *le*, *paode* *pao* *le*

die flee

'His men either died or fled.'

109 na liu ge ren si le wu ge pao le yi ge
six person die five flee one
'Of the six persons, five died and one fled.'

110a naxie yifu youde wo yao youde ta yao
those garment some I want he
'As for the garments, I want some and he wants some.'

110b naxie yifu bushi wo yao bianshi ta yao
not be
'As for the garments, either I or he will take them.'
'(I will take some and he will take the rest.)'

111 na liu jian yifu wo yao wujian ta yao yijian
that six garment I want five he one
'Of the six garments, I want five and he wants one.'

Our point here is that when UNV + N are conjoined, dou is required; when SCP + Pred or SCP + V are conjoined, dou is not needed.

It should be recalled that we are regarding dou as a scope adverb which is a part of the determinative (our decision to introduce some ADscp (i.e. zhi 'only') in the Base and some ADscp (i.e. dou) through transformation does not affect this statement). As for the dou required by the conjoining of nouns, we still can consider it as an ADscp which is a part of the determinative.[35]

3.7.2. UNV and SCP as determinative or nominal.

According to what we have presented for the noun phrase, the following sentence should cause little difficulty, since although the M in SCP and that in UNV have to be matched, they need not be identical. In (b) the noun goes with SCP rather than UNV. For this we can postulate that when M for UNV differs from that for SCP, the N may go with either.

112a *nà* *yi* *ban* *xuesheng* *zhi* *lai* *le* *sange*
that one class student only come three
'Only three of that class of students came.'

112b *na* *yi* *ban* *zhi* *lai* *le* *sange* *xuesheng*
'Only three of that class of students came.'

However, our present P-rules for the noun phrase will have to be revised in order to account for the following:

113a *nàxie* *xuesheng* *zhiyou* *Wang* *San* *lai*
those student only come
'Among those students only Wang San came.'

113b *wenju* *wo* *zhi* *mai* *le* *qianbi*
stationery I only buy pencil
'As for stationery, I bought only pencils.'

113c *zhuo* *shang* *de* *dongxi* *wo* *zhi* *nà* *le* *yizhi* *qianbi*
desk on thing I take one

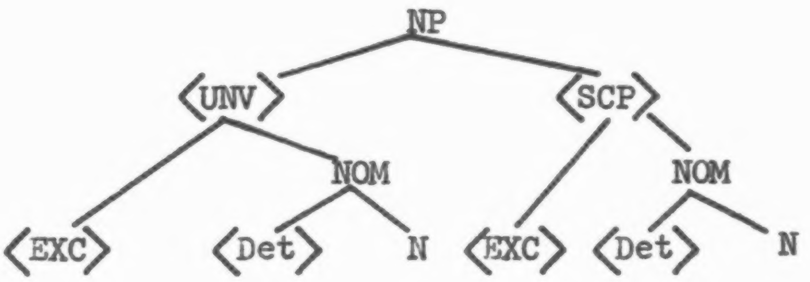
'As for the things on the desk, I took only a pencil.'

113d naben shu wo yige zi dou mei kan

that M book I one character Neg read

'As for that book, I did not read even one single word.'

So far, we have regarded the notions of UNV and SCP as those of the determinative. We shall now consider the possibility of taking the two as nominals by themselves, dominated by a higher order node, which we may still call NP, or subject, object, etc., for their mutual relationship which has been described. Hence we may have a nominal with the following structure.



The order of UNV and SCP as presented above seems to make later adjustments simpler than it was otherwise. The transposition of SCP before UNV does occur occasionally, as sanzhi 'three zhi' in the following.

114a zhuo shang you sanzhi ta zuotian diu de qianbi

desk on have three he yesterday lose pencil

'On the desk there are three of the pencils which he lost yesterday.'

But a clearer way of expressing the same idea is UNV preceding the SCP.

114b *zhuoshang* *you* *ta* *zuotian* *diu* *de* *nàxie* *qianbi* *de* *sanzhi*
desk on have he those

This alternative may have a great advantage in generality. For it will put under the frame UNV-SCP many pairs of nominals that have similar semantic relationship. The non-occurrence of the same noun in the same noun phrase can be explained by the general principle of deletion by identity. Hence the impossible occurrence of the parenthesized words in (115a) and (b) can be easily explained.

115a *jiaju* *wo* *bu* *yao* *mai* *jiu* *de* (*jiaju*)
furniture I not want buy old
'As for furniture I don't want to buy old (or used) pieces.'

115b *nà* *yi* *da* *qianbi* *wo* *diu* *le* *liu* *zhi* (*qianbi*)
that one dozen pencil I lose six
'I lost six (pencils) of that dozen of pencils.'

It would be logically inconsistent to recognize the whole-part relationship between *jiaju* 'furniture' and *jiude* 'old, used' while not admitting such a relationship between *nàxie xuesheng* 'those students' and Wang San (113a), *wenju* 'stationery' and *qianbi* 'pencil' (b), *dongxi* 'things' and *qianbi* 'pencils' (113c).

If this alternative is to be adopted, and we think it proper, we have to answer an important question: How do we formally characterize the universe-scope relationship of any pair of nouns so as to reject improper pairs? Some semantic analysis, including that of the general-specific feature of terms, is a prerequisite.

Another important question related to this alternative is whether the universe-scope device can be extended to cover what Chao calls the owner-owned relationship (1965, p. 125).

116a *ta* *xin* *teng*
he heart ache
'His heart aches.'

116b *ta* *piqi* *huai*
temper bad
'He has a bad temper.'

116c *ta* *shou* *ná* *zhe* *yiben* *shu*
hand take one book
'He has a book in his hand.'

116d *ta* *you* *yizhi* *yanjing* *xia* *le*
have one eye blind

'One of his eyes is blind.'

116e ta you yike yachi diao le

one tooth lose

'He lost one of his teeth.'

116f ta you yizhi shou duan le

one hand break

'One of his arms is broken.'

In contrast with (a, b, c), which we may call cases of person and body part,[36] we seem to have to regard (d, e, f) as cases of class-member by deriving them from (d', e', f'), respectively.

116d' tade liangzhi yanjing dangzhong you yizhi xia le

his two eye among have one blind

'One of his two eyes is blind.'

116e' tade nàxie yachi dangzhong you yike diao le

those tooth one lose

'One of his teeth is lost.'

116f' tade liangzhi shou dangzhong you yizhi duan le

two hand one break

'One of his two arms is broken.'

As in the cases of class and member, the second nouns above can be put right after the verb. (All the linking words will be deleted.)

It should be noted here that the verbs or adjectives with which the separated constituent may occur are much more limited for person and body-part nouns than in the case of class and member constituents.

In BA-sentences (BA = pretransitive) (117) and BEI-sentences (BEI = passive) (118) the owner-owned relationship (a's) seems to behave differently from the class-member relationship (b's). Here person and body part behave similarly to the class member relationship (c's), rather than the owner-owned relationship. On this basis it seems proper that we recognize person and body part as another type of whole-part relationship and include pairs of nouns that have the person and body-part relationship with those for the head nouns of UNV and SCP. Otherwise we would have to regard the relationship in (c's) as the class-member relationship with some deletion.

117a *tamen ba ta da po le huapin
they he hit break vase

117b tamen ba wuge huapin da po le sange
five three

'They broke three of the five vases.'

117c tamen ba ta da po le tou
he hit break head
'They hit him on the head and broke it.'

118a *ta bei da po le huapin
hit break vase

118b wuge huapin bei da po le sange
five three
'Three of the five vases were broken.'

118c ta bei da po le tou
he hit break head
'He got his head hit and broken.'

Judging from the linking formatives that can appear between the two terms in a whole-part construction, the UNV-SCP construction is a kind of modifier-modified construction (i.e. DE-Construction) which the owner-owned relationship and many others also take. Or at least it is a type of structure which can be transformed into such a construction. (The two views will be discussed in the next section.)

119a ta de xin teng
he heart ache
'His heart aches.' (He has a heartache.)

119b nà wujian yifu (li) /de sijian bei tou le
that five garment /you four steal

$\left\{\begin{matrix}\text{in}\\ \text{have}\end{matrix}\right\}$

'Four of five garments were stolen.'

If a general-specific relation (c, d) is not included in universe-scope, deletion (of the part in parentheses, for example) should be recognized.

119c dongwu li $\left\{\begin{matrix}\text{de}\\ \text{zhiyou}\end{matrix}\right\}$ (yi zhong jiaozuo) ren (de dongwu)
animal in $\left\{\begin{matrix}\text{———}\\ \text{only}\end{matrix}\right\}$ (one kind call) man (animal)

hui jianghua
can talk

'Among animals $\left\{\begin{matrix}\text{———}\\ \text{only}\end{matrix}\right\}$ (an animal called) man can talk.'

119d nàxie shuiguo li $\left[\begin{matrix}\text{de}\\ \text{zhiyou}\end{matrix}\right\}$ (yi zhong jiaozuo) mugua
those fruit in papaya

(de shuiguo) lan le
fruit rot

'Among those fruits $\left\{\begin{matrix}\text{———}\\ \text{only}\end{matrix}\right\}$ (that kind of fruit called)

papaya got rotten.'

The alternative of regarding UNV and SCP as nominal rather than determinative is supported by the following observations, in addition to the above discussion.

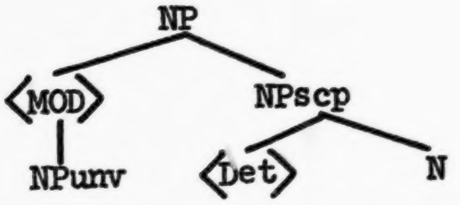
(1) The head noun can go either with the UNV or the SCP in the actual sentence, and deletion of one of the two nouns seems to require less complicated rules than the shifting of a single noun.

(2) From their behavior in sentences, it seems reasonable to assume that when UNV and SCP are spoken, two sets of objects are referred to. It is more natural to conceive of each set of objects as denoted by a head noun, whether it is with or without a modifier and/or determinative, than to conceive of some set of objects denoted only by a modifier or determiner, without any head noun.

3.7.3. UNV as a MOD of SCP

Although we have left open the question raised in 3.7.2, it seems useful to assume that the interpretation suggested there is correct and proceed to see some consequences of this supposition.

If we adopt the solution that both UNV and SCP are nominal phrases, a possible rearrangement of the noun phrase will be:



in which the nominal for universal (NPunv) is regarded as a modifier of the scope nominal (NPscp). This will mean that the notion of UNV-SCP will not be recognized as a grammatical category, but as something between two nominals that are connected by some verb in an embedded sentence functioning as a MOD.

This approach would be very welcome if it were possible to find some constant source for owner-owned, person-body-part, or class-member relationships in which the whole and the part have different nouns.

120a *ta* *you* *zui*

he have mouth

'He has a mouth.'

120b *qianbi* $\left\{\begin{array}{l}\text{shuyu}\\ \text{shi}\end{array}\right\}$ *wenju* (*de* *yi* *zhong*)

pencil $\left\{\begin{array}{l}\text{belong to}\\ \text{be}\end{array}\right\}$

'Pencils $\left\{\begin{array}{l}\text{belong to}\\ \text{are}\end{array}\right\}$ (a kind of) stationery.'

But the difficulties involved are no less than those of the Genitive. For example,

120c *ta you xingzi
he have temper

for a source of ta xingzi ji 'He has a quick temper.'

120d *sanzhi qianbi shi wenju de yizhong
pencil be stationery one kind

for (113b) are not possible.

In a class-member relationship where the class and member have the same terms (nouns) the difficulties are even greater, since:

121a *wuwei keren you sanwei keren
five guest have three guest

is not possible. Sources like

121b zhe sanwei keren zai nà wuwei keren li
three at five in
'These three guests are among the five guests.'

are possible only when both are definite.

Finally, if this alternative is to be adopted, scope expressions for totality need to be treated differently from those for partitive.

122a nàxie ren jiushi quanbu le
those man be all
'Those people make the total.'

122b *nàxie* *ren* *jiushi* *women* *suoshuo* *de* *nàxie* *ren* *de*
those man be we mention those man
quanbu *le*
whole
'Those people are the total of all the people we have been talking about.'

But there seems to be some deletion of a modifier for *quanbu* 'the whole': say, the one in (b).

3.7.4. *you* as the Linking Verb between NP for Universe and NP for SCP.

Suppose that we did not find it objectionable to treat totality and partitivity differently; there is an alternative that might work: we derive the totality as a part of the determinative, and a sentence with a universe and a partitive from a source which has the verb *you* 'have, there be' and a complement. The universe will be regarded as a case of Subject or Place, and the partitive as a case of the object of *you*; the rest of the sentence will be derived from the all-purpose node complement (Comp).

Why the universe can also be regarded as a case of place expression and why *you* 'there is' is an appropriate verb here can be seen from the following.[37]

123a *lanzi* *li* *you* *yige* *juzi* *lan* *le*

basket in have one orange rot

'There is an orange in the basket that has got rotten.'

123b *lanzi* *li* *de* *yige* *juzi* *lan* *le*

basket in one orange rot

'An orange in the basket got rotten.'

124a *nà* *sange* *juzi* *li* *you* *yige* *lan* *le*

those three orange in have one rot

'Of the three oranges, there is one rotten.' or

'One of the three oranges got rotten.'

124b *nà* *sange* *juzi* *li* *de* *yige* *lan* *le*

'One of the three oranges got rotten.'

123c *lanzi* *li* *lan* *le* *yige* *juzi*

basket rot one orange

'In the basket is a rotten orange.'

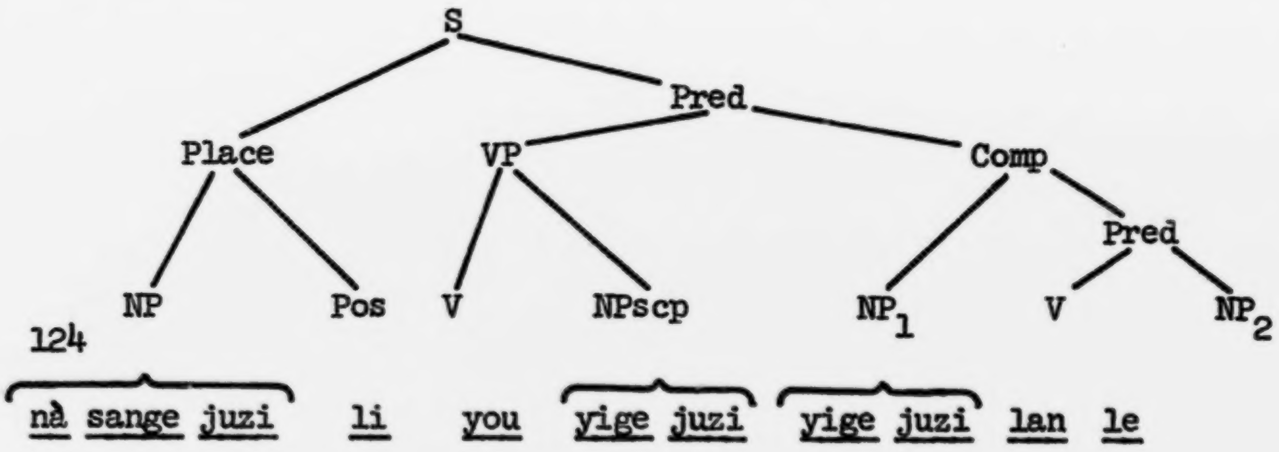
124c *nà* *sange* *juzi* *lan* *le* *yige*

'One of the three oranges got rotten.'

Notice the optional use of localizer *li* 'in' (and *dangzhong*, *zhongjian* 'among' also) for the UNV + N in (124a, b).

It is clear that verb *you* 'there is' is used where an object exists (or is located) in a place, as well as when it exists (or belongs) in a class as a member or subclass.

124



where the NPscp (subscription is used only for explanation here) should be identical with the subject (NP_1), the object (NP_2), or any other possible noun phrases in the complement.

The scheme, to be sure, is used only when a sentence has two phrases that correspond to universe and partitive.

But a sentence with an indefinite noun can be derived from this source in which the noun phrase for universe is unspecified. The indefinite subject in the constituent string will be deleted for its identity with the object of you 'there is.'

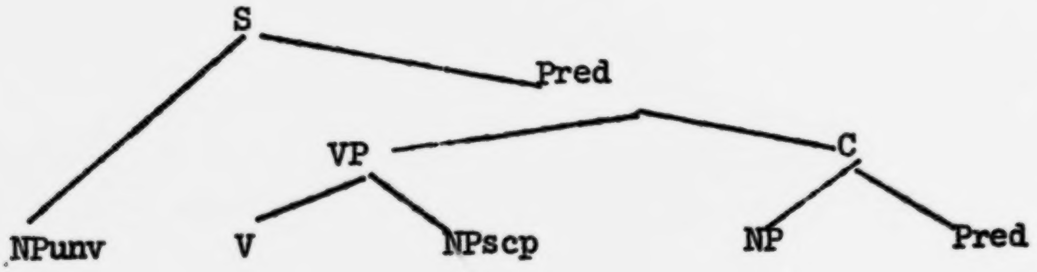
This solution will mean that the you which has been interpreted as an indefinite marker, or a linking word for universe and partitive will now be regarded as a verb.

This approach has several advantages:

(1) It sets forth very naturally the restriction that no

one separated universe-partitive construction occur in the same sentence.

(2) It can also be used for the person-body-part construction, since in both cases *you* is used.[38]



125a * *wo* *you* *xin* (*xin*) *teng*

125b *wo* *you* *yizhi* *yanjing* (*yanjing*) *xia* *le*

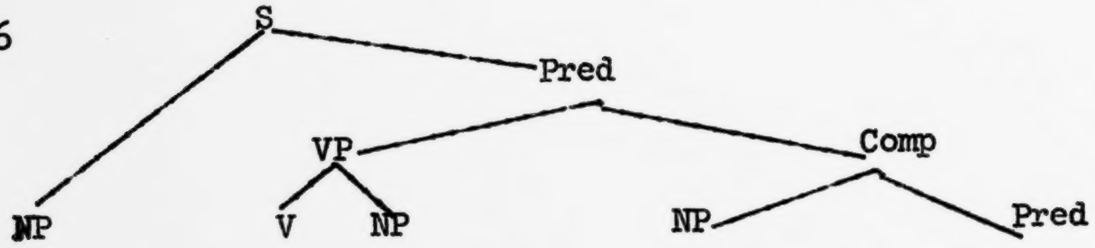
In the examples given above (a) and (b) differ chiefly in the presence or absence of a numeral phrase. After deletion of the identical NP in C, (a) is ungrammatical because of the presence of *you*; (b) is grammatical with or without *you*. Hence obligatory deletion of *you* in the absence of a numeral phrase in (a), following the noun phrase, and optional deletion of it in the presence of a numeral phrase will take care of the problem.[39]

(3) This scheme may enable us to account for the meaning of the verb *you* in a consistent and formal way. It always means 'to have, to possess' when it has a subject in the Base; it means both 'to exist' and 'to possess' when it is preceded by both a subject and a place and/or time expression; it means

indefiniteness for the following noun when no subject or time or place precedes.

(4) Since the universe is often placed at the beginning of a sentence, this scheme settles the problems of transposition and surface structure from the very beginning, at least for some types of sentences. The sentence structure in the Base is roughly right branching, which is widelypreferred by many Chinese grammarians, including Chao.[40]

126



a)	shangxingqi last week	you yitian one day	tianqi weather	henhao very good
b)	tamen dangzhong among them	you yige ren a person	(yige ren)	keyi bu shuijiao can go without sleeping
c)	Meiguo U.S.A.	you yige difang a place	fongjing scenery	henhao very good
d)		you yige xuesheng a student	(yige xuesheng)	turan lai zhao wo came to see me suddenly
e)	nada qianbi that dozen of pencils	you sanzhi (qianbi) three	wo I	daduan le (sanzhi qianbi) broke
f)	" " that dozen of pencils	(" " ")	wo I	daduan le sanzhi (qianbi) broke three

The items in parentheses are to be deleted in the derived strings. Notice that there is the possibility of deleting an element in the matrix because of its identity with another in the constituent string. (Cf. (e) and (f).) This will adequately take care of cases where the whole and part are separated by a transitive verb (but not by an intransitive verb).

There are several reasons, however, for which we hesitate to adopt this alternative for the time being.

(1) The relationship between the verb you and the complement is hard to explain. Chinese has resultative complements which are closely related to the verb in their denotation of the result of the action denoted by the verb. This interpretation will not work for the type of complement which is considered here. It may be proper to interpret it as an object complement. But how this interpretation should be incorporated in the rules and how its differences from the other complements and noun modifiers should be indicated will have to be clarified before we can resort to it. Otherwise 'complement' will become a notion which is no better than an escape hatch to which we turn whenever difficulty arises.

(2) The pattern UNV + det SCP is needed anyway before or after a verb. It seems to be simpler and more natural to transpose UNV to the beginning of a sentence on account of its topic

nature than to shift it from the beginning of a sentence and juxtapose it with its SCP.

(3) To achieve greater economy in structural description for many complicated transformations (including topicizing, BA, BEI, predication, etc.) it is desirable that we recognize the notions of universe and scope and have specific nodes labeled as such,[41] rather than depend upon their positions in a string with the verb you, which is likely to have been disturbed in a previous transformation.

(4) It is important to indicate the semantic relationship between the UNV and SCP, and it seems rather hard to do so without the two nodes labeled. The you between the two would not be reliable because there are several types of NP + you + NP + Comp and we need to set up several types of you in order to exclude all other types of relationships (the owner-owned relationship, for example) between the two NP's for semantic readings.

4. Excluding adverbials (EXC)

4.1. EXC in general

Excluding adverbials in Chinese seem to be a very general type. For they have a general form chule + S' + yiwai, which may occur as a sentence adverb (127a), a predicate adverb (b), or a part of a noun phrase.

127a *chule* *ta* *peiqian* *yiwai* *ni* *ye* *yao* *daoqian*
except he compensate you also want apologize
'He needs to compensate and, besides, you also need to apologize.'

127b *jintian* *zaoshang* *wo* *chule* *kan* *shu* *yiwai*, *hai* *xie*
today morning I read book still write
le *liangfeng* *xin*
two letter
'In addition to reading, I wrote two letters this morning.'

A sentence-excluding adverb has a constituent string that has neither noun phrase nor predicate matched in the matrix string; a predicate-excluding adverb has a constituent string which is different from the matrix only in the predicate; a determinative one has a constituent string that is different from the matrix only in the noun phrase and sometimes in the presence or absence of a negative marker in the predicate.

4.2. EXC as a part of NP

Determinative-excluding adverbials have the basic form *chule* + S + *yiwai* + *qitade*, which has the following characteristics:

(1) The identical elements in the constituent string need not be deleted, though such a deletion is frequent.

128a *chule* *Wang* *San* *mei* *si* *yiwai* *qitade* *nà* *jiuge*

except not die other nine

ren *dou* *si* *le*

man all die

'Except Wang San, who did not die, the other nine persons all died.'

128b *chule* *Wang* *San* *mei* *si* *yiwai* *qitade* *ren* *haiyou*

man still

Zhang *San* *ye* *mei* *si*

also not die

'Wang San did not die, and among the others Zhang San did not die either.'

128c *chule* *Wang* *San* *mei* *si* *qitade* *ren* *haiyou* *sange*

ye *mei* *si* three

'Wang San did not die, and three (out of the) others did not die either.'

128d *chule* *Wang* *San* *mei* *si* , *qitade* *ren* *ye* *dou* *mei* *si*

also all not die

'Wang San did not die, and none of the others died either.'

(2) If the predicates of the constituent and matrix strings both have or both lack the negative marker, the adverb of repetition *ye* 'also' is required in front of the matrix predicate (128c, d, 129b, c); if one has it and the other does not, a totality scope is implied, and hence the presence of *dou* before the predicate (128a, b, 129a) (see (6) for implications of these cooccurrence restrictions in sentences where EXC is deleted).

(3) If the constituent and matrix strings have the same sign of negation, the scope is usually partitive, but totality is also possible in spite of its redundancy (129d).

129a *chule Wang San si le yiwai, qitade nà jiuge ren*
die other nine person
quan dou mei si
all not die
'Except that Wang San died, none of the other nine persons died.'

129b *chule Wang San si le yiwai, qitade jiuge ren haiyou*
still
Zhang San ye si le
also
'Wang San died, and among the other nine persons Zhang San died too.'

129c *chule Wang San si le yiwai*, *qitade jiuge ren zhizhong*
among

(*haiyou*) *sange ren ye si le*

'Wang San died, and three among the other nine persons also died.'

129d *chule Wang San si le yiwai*, *qitade jiuge ren ye dou si le*
all

'Wang San died, and so did all of the other nine people.'

129e *chule Wang San si le yiwai*, *qitade jiuge ren hai si le*
still

sange ren
three

'Wang San died; three among the other nine persons also died.'

Here are examples in which the object has EXC.

130a *chule* A *ban de xuesheng wo renshi yiwai*, *qitade*
except class student I know other

wo dou bu renshi
I all not know

'Except the students in Class A (whom I know) I do not know any other (students).'

130b *chule* A *ban* *de* *xuesheng* *wo* *renshi* *yiwai*, *qitade* *haiyou*
jige *wo* *ye* *renshi* still
several I also know
'Besides the students in Class A whom I know, I also know some other students.'

130c *chule* A *ban* *de* *xuesheng* *wo* *renshi* *yiwai*, *qitade* *wo* *hai*
renshi *jige*
several
'Besides the students in Class A whom I know, I also know some other students.'

130d *chule* A *ban* *de* *xuesheng* *wo* *renshi* *yiwai*, *qitade* *wo*
ye *renshi* *jige*
also
'Besides the students in Class A whom I know, I also know some other students.'

(4) If the matrix string has a non-negated verb, the scope can be placed after the verb as usual (130c, d).

(5) There are several ways in which a sentence with EXC and *ye* 'also' is realized. For example,(129c) may have the following possibilities:

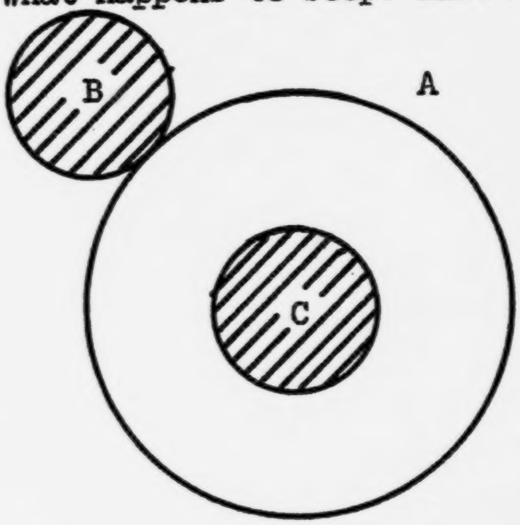
	EXC	UNV	SCP
a.	chule Wang San sile yiwai qitade	nàjiuge ren	haiyou sange ye sile
b.	chule Wang San yiwai qitade	nàjiuge ren	haiyou sange ye sile
c.	chule Wang San qitade	nàjiuge ren	haiyou sange ye sile
d.	chule Wang San	nàjiuge ren	haiyou sange ye sile
e.	chule Wang San	nàjiuge	haiyou sange ye sile
f.	chule Wang San	nàjiuge ren	hai sile sange
g.	chule Wang San	nàjiuge	hai sile sange
h.	qitade	nàjiuge ren	haiyou sange ye sile
i.	qitade	nàjiuge ren	hai sile sange
j.	qitade	nàjiuge	hai sile sange
k.	qitade	nàjiuge ren	ye sile sange
l.		nàjiuge ren	ye sile sange

Some other possibilities are ignored here, e.g. change of *qitade* into *qita*.

4.3. Implications of *ye* 'also' and *qitade* 'other'

(6) The linking word between the UNV and SCP is *haiyou* 'still,' instead of simply *you*, if *ye* 'too, also' is present.

It is important to notice that the *ye* 'also' in b, c, d, e, h, k, l and *hai* 'still' in f, g, i, j serve to denote that what happens to scope also happens to the nominal in EXC.



where

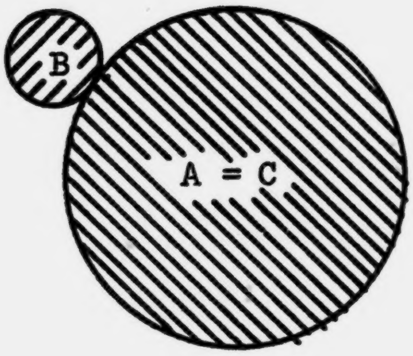
A = *nàxie* *ren* (UNV)
those people

B = *Wang* *San* (EXC)

C = *sange* (*ren*) (SCP^{a})
three

The slant lines in the same direction indicate that B and C have the same sign for their verbs with regard to negation.

If there is no *ye* 'also' present, the relation of A, B, C can be shown as follows:



chule [Wang San] mei si yiwai qitade
B (EXC)
[nà jiuge ren][quan]   dou si le
A (UNV)   C (SCP^{a})
'Except Wang San, who did not die,
all the other nine persons died.'

The slant lines in a different direction indicate that B and C have different signs for their verbs.

(7) Since the chule 'except, besides' phrase and qitade 'other' are redundant, either of them can be deleted. When the chule phrase is deleted (h, i, j, k) the qitade denotes that reference to something or somebody else is implied, and the presence or absence of the ye 'also' (or hai 'still') suggests what happens to this something or somebody.

(8) In case the noun phrase has an EXC and UNV without SCP and the whole EXC is deleted (131a), the presence of ye 'also' will make the sentence very ambiguous. e.g.:

131a Zhang San ye yao daoqian
also need apologize
'Zhang San also needs to apologize.'

131b *Wang San yao* *peiqian,* *Zhang San ye yao daoqian*
compensate
'Wang San needs to compensate, and besides, Zhang San needs to apologize.'

131c *Zhang San yao peiqian ye yao daoqian*
'Zhang San needs to apologize besides giving compensation.'

131d *chule Li Si yao daoqian yiwai Zhang San ye yao daoqian*
'Zhang San, as well as Li Si, needs to apologize.'

(A) may indicate a deletion of a sentence EXC (b), a predicate EXC (c), predicate EXC (d), or several others.

4.4. EXC to UNV and EXC to SCP

The difference between EXC to UNV and EXC to SCP has been briefly discussed in 2. Here, we supply more examples and two diagrams for EXC to SCP for comparison with the above, which are those for EXC to UNV.

132a *nà* *jiuge ren* *chule Wang San mei si* *yiwai,*
those nine person except not die
qitade (*bage ren*) *dou si le*
other eight person all die
'Except Wang San, who did not die, the rest of the

nine persons died.'

132b *nà jiuge ren chule Wang San mei si yiwai*, *qitade ren*
haiyou *Zhang San ye mei si*
still
'As for the nine persons, Wang San did not die, and among the rest there is Zhang San who did not die either.'

132c *nà jiuge ren chule Wang San mei si yiwai*, *qitade*
haiyou *sange ren ye mei si*
three
'As for the nine persons, Wang San did not die, and there are still three among the rest who did not die either.'

132d *nà jiuge ren chule Wang San mei si yiwai*, *qitade ren*
ye dou mei si
all
'As for the nine persons, Wang San did not die, and all the rest did not die either.'

132e *nà jiuge ren chule Wang San mei si yiwai*, *qitade si*
le sange ren
'As for the nine persons, Wang San did not die, and three among the rest died.'

133a *nà jiuge ren chule Wang San si le yiwai*, *qitade*
quan dou mei si
all not die
'As for the nine persons, with the exception of Wang San (who died), none of the rest died.'

133b *nà jiuge ren chule Wang San si le yiwai*, *qitade*
haiyou *Zhang San ye si le*
'As for the nine persons, Wang San died, and besides, Zhang San died too.'

133c *nà jiuge ren chule Wang San si le yiwai*, *qita haiyou*
sange ren *ye si le*
three
'As for the nine persons, Wang San died, and three among the rest also died.'

133d *nà jiuge ren chule Wang San si le yiwai*, *qitade ye quan*
dou si le
all die
'As for the nine persons, Wang San died, and all the rest died also.'

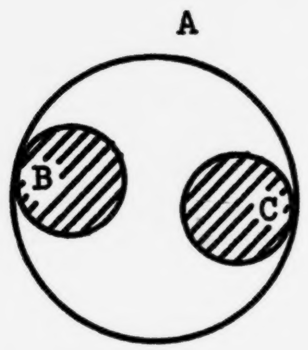
Here are examples in which the object has EXC to SCP:

134a B *ban* *de* *xuesheng* *chule* *Wang* *San* *yiwai*, *qitade*
class student
wo *dou* *bu* *renshi*
I all not know
'Except Wang San, I do not know anybody in Class B.'

134b B *ban* *de* *xuesheng* *chule* *Wang* *San* *yiwai* *qitade* *haiyou*
still
jige *wo* *ye* *renshi*
several I also know
'Besides Wang San, I know several others in Class B.'

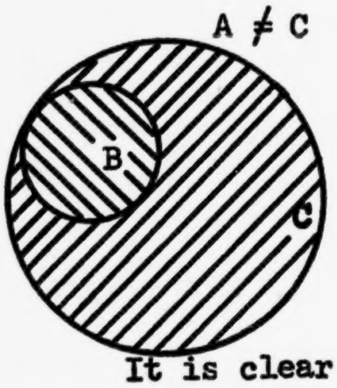
134c B *ban* *de* *xuesheng* *chule* *Wang* *San* *yiwai* *qitade* *wo*
ye *renshi* *jige*
'Besides Wang San, I know several others in Class B.'

The c's can be represented as



A - jiuge ren (UNV^a) 'nine persons'
B = Wang San (EXC)
C = sange ren (SCP) 'three persons'

And (a's) can be represented as



A = jiuge ren (UNV^{a}) 'nine persons'

B = Wang San (EXC)

C = (qitade ren) quan (SCP)

'all (others)'

It is clear from the diagrams that EXC to UNV does not affect the value of totality SCP, whereas an EXC to SCP does.

5. Universe and notions of subject and topic.

In this section we shall discuss the problem of topic (or subject) in connection with the notion of UNV which we have introduced.

5.1. The concept of subject.

So far we have been using the term subject for labeling the constituent that has the categorical meaning of actor (before an active verb) or the possessor of some quality or state (before an adjective or a linking verb). It is, therefore, a relational concept in the sentence. In the deep structure it appears in front of the predicate, and the whole or a part of it may be shifted to follow the verb.

5.2. The concept of topic.

Those who reject the notion of transformation generally refuse to regard the ta in (135b) as the object of the sentence, and may analyze it as the subject or an adverbial of reference.

Chao (1965) is rather unique in regarding the ta as the grammatical subject and in recognizing an understood object *ta* after the verb.[42] It can be easily understood that to this group of grammarians, topic is equated with the subject.

Among those who favor the idea of transformation in grammatical analysis, opinions differ as to the nature of the transposition of the *ta* from a position after the verb (135a) to the beginning of the sentence (135b).

135a *wo* *kanjian* *ta* *le*
I see he
'I saw him.'

135b *ta* *wo* *kanjian* *le*
he I see
'I saw him.'

What semantic changes are involved in the transformation from (a) to (b)? The most common interpretations are emphasis, contrast, topicization, and logical subject.[43] So far as meaning is concerned, none of these terms seems to be more convincing than the other. If we observe the conditioning factors responsible for such a transposition, however, topicization seems to be the best label, and we shall regard the *ta* in (b) as the topic of the sentence.

To explain the notion of topic satisfactorily we seem to have to go beyond our domain, the sentence. For example, (135b) is a much more natural answer to (136) than (135a) is.

136 ni kanjian le ta meiyou?
you see he not
'Did you see him?'

The topic is something already known, introduced, or assumed to be understood, such that some new information about it is the focus of interest; that is, it is something at which the point of the message is directed. Hence it may be the subject, the object, or some adverbial which denotes what is already known (and hence what appears in some previous sentence or the life context) that assumes the role of the topic.

In the surface structure, the topic always appears at the beginning of the sentence (a, b), or the predicate (c).

137a wo du le zheben shu le
I read this book
'I read this book.'

137b zheben shu wo du le
this book I read
'I read this book.'

137c wo zheben shu du le
I, this book read 'I read this book.'

In (a) and (c) the subject coincides with the sentence topic; in (b) and (c) the object assumes the sentence and predicate topic, respectively.

To discuss how this notion of topic should be incorporated in the base structure would be in the domain of extension grammar, which is beyond the scope of our present study--sentence grammar. Nevertheless, it would not seem irrelevant for us to discuss what types of and what part of noun phrases are eligible for the topic, in connection with the notions of universe and scope.

5.3. Universe and topicization.

From what we discussed in Section 2, on definite and indefinite reference, and in Section 3, on the positions of the components of the noun phrase (especially in 3.5.5.), it should not be hard to see that there are some internal elements that condition the eligibility of a certain part of the noun phrase to assume the role of topic (which is, however, externally conditioned; i.e. conditioned by factors outside the sentence).

It seems generally true that scope, if it is separated from the rest of the noun phrase, often plays the role of the point of the message, or the main part of the comment about topic. This part of the noun phrase, therefore, is generally not eligible for the role of the topic. (Indefinite scope with an unspecified universe, however, may be topicized under a certain condition.)

The universe, in contrast with the scope, is generally already known, definite, and helps identify the scope.

It is, of course, the head noun and this part of the noun phrase that are eligible for the role of the topic. It will be recalled that in Section 3.5.5. most cases of SCP are found to be obligatorily separated from the rest of the noun phrase. This may not necessarily mean that the rest of the noun phrase should be obligatorily topicized. (The topicization, to be sure, is externally conditioned.) But it means that in case the NP is the object, either the noun phrase should be turned into the form UNV + N + de + SCP or the UNV + N should be topicized, i.e. transposed to the beginning of the predicate or the sentence, and that in case the NP is the subject, either the NP should be turned into UNV + N + de + SCP, or the SCP should be excluded from the topic; i.e. SCP is transposed to follow the verb, or the modifier marker de is deleted or replaced by you. Within the scope of sentence grammar the choice between the two possibilities in either case seems to have to be regarded as arbitrary.

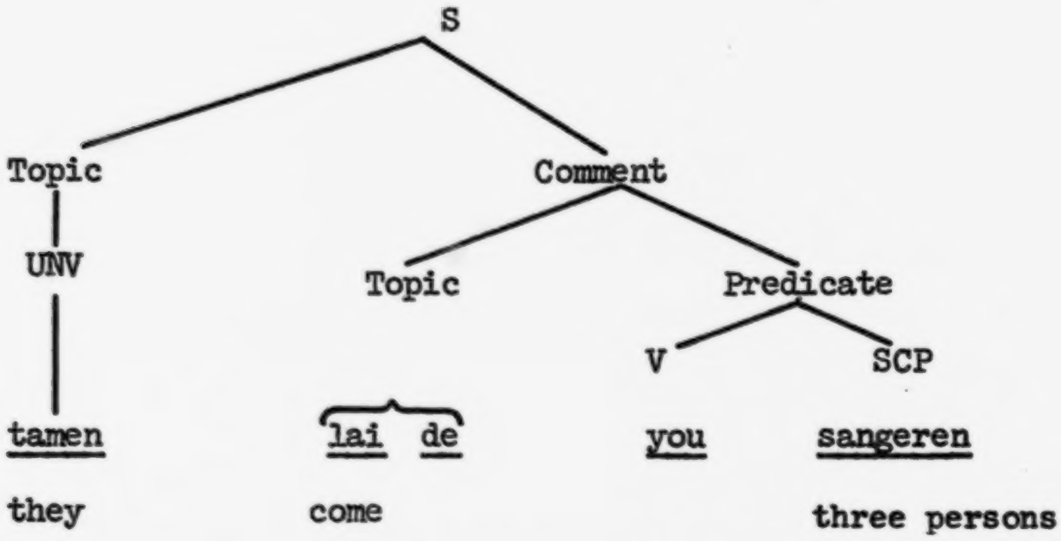
5.4. Scope and predication.

Since the predicate or the comment is that part of the sentence that carries the point of the message, and since scope is often the point of the message, it is very common for the scope alone to assume the role of predicate or comment in the sentence. We shall refer to this as the predication of scope.

In predicating the scope, the verb used may be the copular shi 'be' the existentive you 'there be, have' or other quantitative verbs like da 'reach, amount to.' Since there are differences in meaning among these verbs, the choice among them had better be determined in the Base than introduced transformationally.

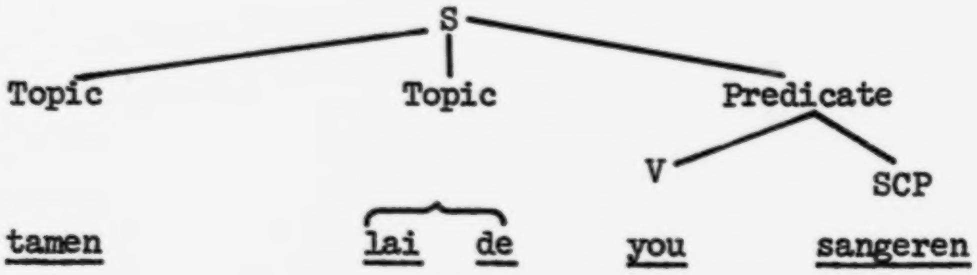
The predication of scope implies that the rest of the sentence is topicized, which of course includes the universe. An exclusive predication of scope and an exclusive topicization of universe may or may not cooccur in the same sentence. When they do, the surface structure can be interpreted in two ways, A or B.

A


S
Topic
Comment
UNV
Topic
Predicate
V
SCP
tamen
lai de
you
sangeren
they
come
three persons

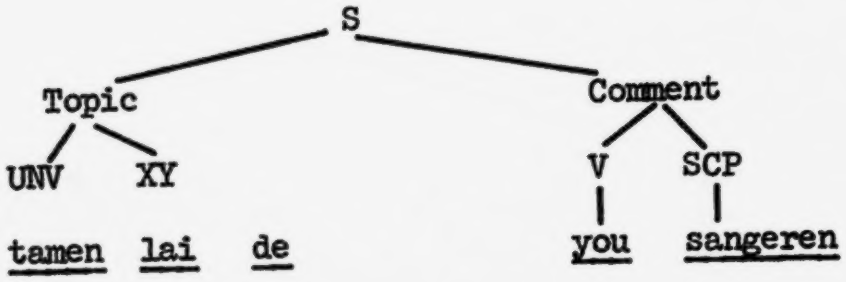
'There are three of them who came.'

B


S
Topic
Topic
Predicate
V
SCP
tamen
lai de
you
sangeren

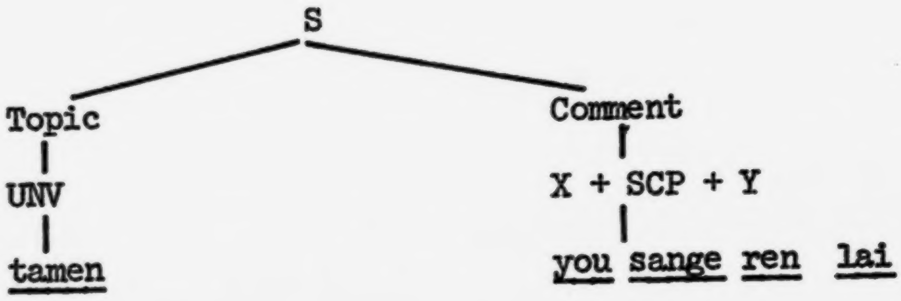
It seems better to eliminate either structure A or B as superfluous, since either one suffices to account for its difference from C, where SCP is predicated, and D, where UNV is topicized.

C


S
Topic
Comment
UNV
XY
V
SCP
tamen
lai
de
you
sangeren

'There are three of them who came.'

D


S
Topic
Comment
UNV
X + SCP + Y
tamen
you
sange
ren
lai

'Three of them came.'

Here are further examples for topicization of UNV (a's), in contrast with predication of SCP (b'). It should be mentioned that when the main verb or a partitive scope is negated, or when SCP is expanded into Degree + Adjective, a sentence without an exclusive predication SCP may sound unnatural, or even ungrammatical.

A. SCP = (D) + Numeral Phrase:

138a nà baben shu you (zhe) sanben mei maidiao

'Of the eight books, (these) three were not sold.'

138b *nà baben shu mei maidiao de shi zhe sanben*

'Of the eight books, these were the three which were not sold.'

B. SCP = ADscp + N + conj + N:

139a *tamen zhi you Wang xiansheng he Li xiansheng lai guo*

'Of them, only Mr. Wang and Mr. Li have been here.'

139b *tamen* (*dangzhong*) *lai guo de zhi you Wang xiansheng he Li xiansheng*

'Of them, there are only Mr. Wang and Mr. Li who have been here.'

C. SCP = Neg + Degree + Adjective (with a positive main verb):

140a *nàxie xuesheng meiyou nàme duo lai*

'Of those students, not that many came.'

140b *nàxie xuesheng lai de meiyou name duo*

'Of those students, there were not that many who came.'

D. SCP = Neg + Degree + Adjective (with a negative main verb):

141a *nàxie xuesheng meiyou nàme duo ren mei lai*

'Of those students, those who did not come were not that many.'

141b *nàxie xuesheng mei lai de meiyou nàme duo*

'Of those students, there were not that many who did not come.'

E. SCP = Neg + Partitive:

142a *neixie* *shu* *meiyou* *yiben* *haokan*

'None of those books is interesting.'

142b *neixie* *shu* *haokan* *de* *yiben* *ye* *meiyou*

'Of those books, there is no single book that is interesting.'

142c *neixie* *shu* *yiben* *haoken* *de* *ye* *meiyou*

'Of those books, there is no single book that is interesting.'

Generally, the negative marker goes with the partitive. But sometimes they may be separated by other elements, as in (c).

It can be expected that an interrogated SCP (indicated by Q[X] in the following) tends to be predicated, and an answer to such a question would be improper, unless the SCP, the main concern in the answer sentence, is likewise predicated.

F. SCP = Q [D] + Numeral Phrase:

143a *nà* *bawei* *keren* *you* *nǎ* *sanwei* *mei* *lai*?

'Of those eight guests, which three did not come?'

143b *nà* *bawei* *keren* *mei* *lai* *de* *shi* *nǎ* *sanwei*

'Of those eight guests, which were the three who didn't come?'

G. SCP = Q[D + NUP]:

144a nà bawei keren you nǎ jiwei mei lai?

'Of the eight guests, how many did not come, and who are they?'

144b nà bawei keren meilai de shi nǎ jiwei?

'Of the eight guests, how many were there who did not come, and who are they?'

H. SCP = Q[NUP]:

145a nà bawei keren you jiwei lai le?

'Of the eight guests, how many came?'

145b nà bawei keren lai de you jiwei?

'Of the eight guests, how many were there who came?'

I. SCP = Q[N]:

146a nàxie ren ni renshi shei?

'Of those people, whom do you know?'

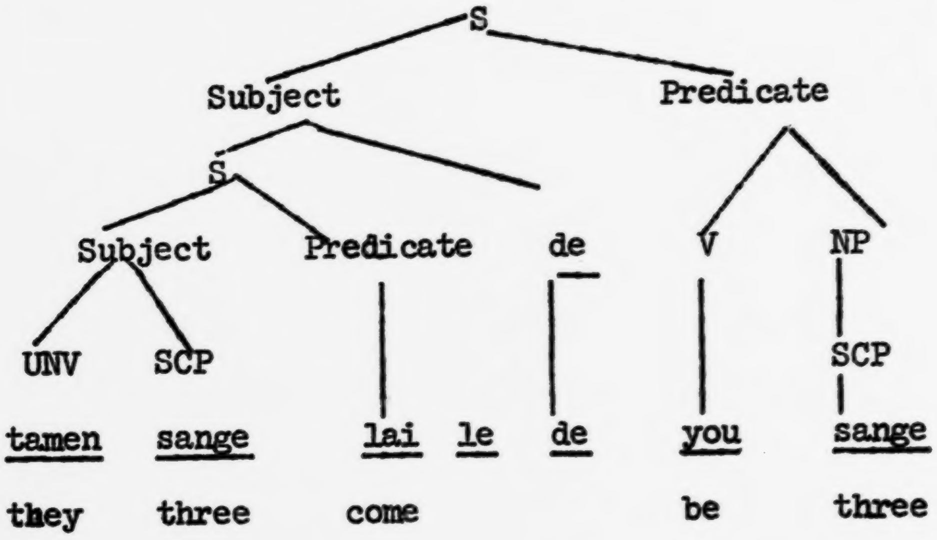
146b nàxie ren ni renshi de you shei?

'Of those people, who are those whom you know?'

5.5. Alternative for topic and comment.

In sections 1. through 4. we assumed that sentences (6a) and (b) are identical in (denotative) meaning, and hence share the same deep structure. In this section we are assuming that two such sentences are different from each other, and should have different deep structures. We have introduced the notions of topic and comment to account for the differences between pairs of sentences like (6a) and (b). However, we are not clear as to what kind of status topic and comment have in the grammar, and here we shall discuss briefly some alternatives for treating them.

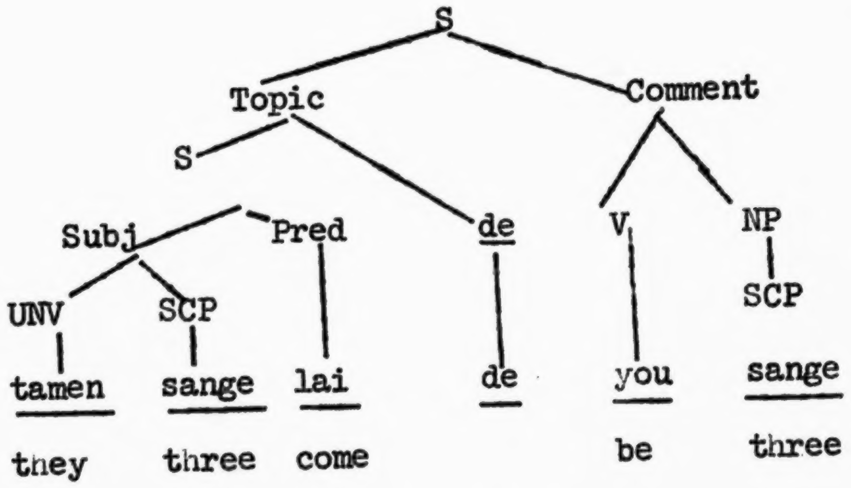
(1) The notions of topic and comment are equated with subject and predicate, respectively, and the idea of topicization or predication is expressed through embedding plus permutation or deletion transformations.


S
Subject
Predicate
S
Subject
Predicate
de
V
NP
UNV
SCP
SCP
tamen
sange
lai
le
de
you
sange
they
three
come
be
three

(2) The notions of topic and comment are, as tentatively suggested by Chomsky (1965), implied in the surface structure

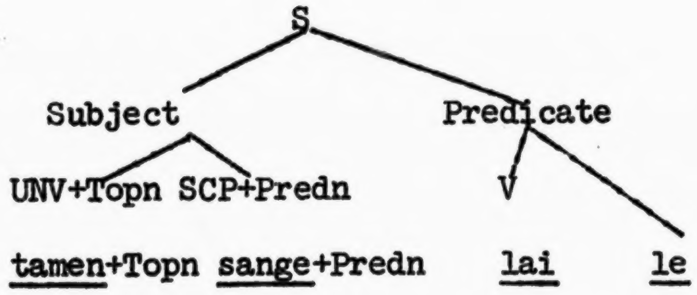
(the leftmost NP immediately dominated by S in the surface structure) and need not appear in the Base.[44]

(3) They are regarded as high order categories that may dominate a sentence or categories like subject or predicate, just as we have shown in the beginning of this section. This would mean that the denotative meaning is shown in the lower portion of P-markers, and relations like topic-comment are shown in the higher portion of P-markers.


S
Topic
Comment
S
Subj
Pred
de
V
NP
UNV
SCP
SCP
tamen
sange
lai
de
you
sange
they
three
come
be
three

It should be mentioned that the notions of topic and comment have more bearing on the final arrangements of sentences.

(4) They are treated as formatives that appear in the Base so as merely to trigger a permutation transformation with or without additional markers like de, de you, de shi, you. Therefore the deep structure of the sentence would be somewhat like:


S
Subject
Predicate
UNV+Topn
SCP+Predn
V
tamen+Topn
sange+Predn
lai
le

Topn = Topicization

Predn = Predication

This approach as well as the second one will meet with difficulties in deriving the desired surface structures, owing to the inadequacy of the current conventions for writing transformational rules.

REFERENCES

Annear, Sandra Sue. 1965. *English and Mandarin Chinese: Definite and indefinite determiners and modifying clause structures. POLA (Project on Linguistic Analysis) Report 11*. (Ohio State University M.A. thesis, 1965.)

Bach, Emmon. Nouns and noun phrases. (Unpublished paper distributed through PEGS [Program for Exchange of Generative Studies, M.I.T.].)

Chao, Yuen-Ren. 1965. *Grammar of Spoken Chinese*. Berkeley, University of California Press.

Cheng, Robert L. 1966. *Some aspects of Mandarin syntax*. (Unpublished Indiana University Ph.D. diss.)

Chomsky, Noam. 1965. *Aspects of the theory of syntax*. The Hague, Mouton.

Dean, Janet. May, 1966. Determiners and relative clauses. (Unpublished paper distributed through PEGS.)

Fillmore, Charles J. 1965. *Indirect object constructions in English and the ordering of transformations*. *Monograph on Linguistic Analysis 1*. The Hague, Mouton.

Fincher, Beverly Hung. 1966. *A fragment of Mandarin syntax.* (Indiana University Ph.D. diss.)

Hashimoto, Ann Y. 1966. *Embedding in Chinese.* *POLA Report 13.* (Ohio State University Ph.D. diss.)

Householder, Fred W. and Robert L. Cheng. Universe-scope relations in Chinese and Japanese. (To appear in *International Journal of Oriental Languages*.)

McCawley, J. D. April, 1967. How to find semantic universals in the event that there are any. (Unpublished paper distributed through PEGS.)

Rand, Earl. 1966. *The syntax of Chinese interrogative structures.* (Unpublished University of Texas Ph.D. diss.)

Ross, John Robert. May 16, 1967. Auxiliaries as main verbs. (Unpublished paper distributed through PEGS.)

Wang, William S-Y. 1964. Some syntactic rules for Mandarin. *Proceedings of the Ninth International Congress of Linguistics* 191-202. The Hague, Mouton.

________. 1965. Two aspect markers in Mandarin. *Language* 41.3:457-70. (Also in *POLA Report 8* [Dec., 1964].)

Wierzbicka, Anna. March, 1967. Mind and body--from the semantic point of view. (Unpublished paper distributed through PEGS.)

FOOTNOTES

[1] This is a revised version of the sixth chapter of my doctoral dissertation, entitled "Some Aspects of Mandarin Syntax" (1966) at Indiana University. The original heading of the chapter was "Scope as Part of the Determinative."

With the collaboration of Professor Fred W. Householder, I have written a paper entitled "Universe-Scope Relations in Chinese and Japanese," where a comparison is made between Chinese and Japanese with regard to the universe-scope relation as a semantico-syntactic notion.

I wish to thank Professors Y. R. Chao, Samuel Martin, and W. S-Y. Wang and Mr. Thomas Roberts for their comments and suggestions on my dissertation; these have been very helpful in my revision. I would also like to express again my gratitude to Professor F. W. Householder for his patience and kindness in guiding my dissertation, and for his continued encouragement and concern for the improvement of this study.

[1a] I do not consider the following interpretation, though it may be possible for the English translation.

(v) BL U BC

The following sentence might express (v):

ta xiang kankan tushuguan li de shu han yong zhongwen xie de shu
'He wants to see books that are in the library and also books that are written in Chinese.'

[2] See Bach for a discussion of how English noun phrases should be derived. He asserts that all nouns should be derived from relative clauses based on the predicate-nominal constituent.

[3] I am not sure that all instances of these words in Mandarin are adjunctive to nominals, but in most cases where these words appear to be verbal adverbs, they are actually noun adjunctives and should be regarded as part of noun phrases. In the following example, the *zhi* which is generally regarded as a verbal adverb is actually a modifier of the noun phrase *chang liuxing gequ*, 'to sing popular songs,' or of the noun phrase *liuxing gequ* 'popular songs,' which are more closely related to (b) and (c), respectively.

(a) *wo zhi hui chang liuxing gequ*
'I only can sing popular songs.'

(b) *wo hui de zhi shi chang liuxing gequ*
be
'The only thing I can do is sing popular songs.'

(c) *wo hui chang de (ge) zhi shi liuxing gequ*

(c') ge wo hui chang de zhi shi liuxing gequ
'The only songs that I can sing are popular songs.'

That chang liuxing gequ 'to sing popular songs' would have been better analyzed as nominal and the hui 'can' as a main verb is supported by several considerations. Some of the reasons given by Ross (May, 1967) apply to Chinese, too.

[4] This explanation is similar to Bach's suggestions for noun phrases. This example shows the difficulty of recognizing noun phrases in sentences, since we are not merely giving classificatory labels to elements in actual sentences, but are trying to postulate deep structures, and such postulations are more or less determined by semantic considerations.

[5] Some generative works on Chinese syntax are Wang (1964, 1965), Fincher (1965), Hashimoto (1966), and Rand (1966).

[6] I am not, however, writing about universal generative semantics. My Base is an ad hoc postulation for the interrelationships between meaning and form in Mandarin sentences.

[7] Another category the members of which often imply deictic reference is that of the pronouns wo 'I' and ni 'you,' and sometimes ta 'he, she.'

[8] Cf. Janet Dean's (1966) description of English determiners

and her remarks about English indefinite and definite articles, which correlate more closely in occurrence with unique and non-unique reference than do their Chinese counterparts.

[9] *you* is deleted optionally before the verb and obligatorily after the verb. Nevertheless, we can regard the presence of NUP and the absence of any other determiner as a 'marker' of indefiniteness.

[10] The *nà* in (33a) is ambiguous; it could be either definite or deictic. As a definite marker the noun can be understood as:
women gang tiguo de nàge ren
we just mention that person
'this particular person we just mentioned'.
zhege and *nage* before a proper noun are also used to differentiate between more than one reference that may occur to the hearer. The proper noun here can be regarded as a common noun. Hence (33a) can be understood as:
wo pian bu ba nàge Wang San (*bushi qitade nàge*) *dailai*
'I stubbornly did not bring that Wang San, not the other Wang San, here.'

[11] If one believes that the same Base should be shared by all languages, this question is not likely to arise, since there must be some languages which mark definiteness and indefiniteness

obligatorily. See Bach and McCawley (1967) for views in favor of universal semantics as the Base.

[12] I analyze *nàben* as a contraction of *nàyiben*, *nàxieshu* as a contraction of *nàyixieshu*, etc., where deletion of *yi* is a particular case of a more general phenomenon. Cf. *wo xiang kan ben shu* 'I would like to read a book.' *wo xiang kan xie shu* 'I would like to read some books.'

[13] I adopt a convention in which A [B] stands for 'A dominates B.'

[14] This seems to involve the theoretical issue of whether a solution reached on the basis of a simplicity criterion alone will coincide with one which takes the speaker's intuition as a complementary criterion. If one accepts simplicity as the sole criterion for choosing between two alternative solutions, then one would not hesitate to derive all cases of D + *yixie* + Mc from D + NU + Mc (where NU is a numeral greater than one), since this seems to make the whole grammar simpler than the other alternative. One way to get away from this problem is not to recognize any transformation between the numerals and what we call the pronumeral, *yixie* 'some,' *jige* 'several,' etc.

[15] Pretransitive: a marker used for transposition of the object from after the verb to before it. BA has the shapes ba, jiang (lit.), and guan (used chiefly when the verb is jiao 'call').

[16] I use the terms subject and object in the sense of actor and acted-upon, respectively. I use the terms topic and comment for the concepts which Chao and others call subject and predicate, respectively.

[17] BEI is realized as bei, jiao, gei, rang.

[18] The optional element zhi 'only' will be discussed in detail in 3.5.

[19] If surface structures are the chief concern in our analysis, there are indeed several reasons in favor of regarding the second expressions as a quantitative adverb of the verb. However, since we feel that (49) and (51) are similar in meaning and should have similar deep structures, this possibility is rejected.

[20] Though it seems reasonable to assume that all definite nouns have understood MOD's, this is not further discussed. See Bach, "Nouns and Noun Phrases."

[21] This interpretation is more suitable because it

also accounts for the categorial meaning of Prt and MOD.

[22] Following W. Wang (1964), "Two Aspect Markers in Mandarin," we are analyzing *mei* as the Neg in Neg + ASP, and *bu* or *bushi* as the Neg in other environments.

[23] By this we mean *shifen zhi yi* 'a tenth,' *yicheng* '10%,' *yiban* 'a half,' *baifen zhi shi* '10%,' etc. which we are not treating further.

[24] ADscp *zhi* 'only' will be discussed later.

[25a] If the verb cooccurs with BA or BEI, *zhi* can occur before BA, BEI or before the verb. This may be one of the reasons why BA, BEI are regarded as verbs by some authors.

[25b] Some speakers distinguish between *zhi* and *cai*, reserving *cai* for contexts where a time dimension is implied, as in this example. For most speakers the two are interchangeable in the sense of 'only.'

[26] Some types of entailment rules suggested by Fillmore may be used for a formal characterization of this sort of semantic implication (1965).

[27] For an explanation of this *hai* 'still,' see (4).

[28] For convenience of discussion in the following passages,

let a stand for shiwan ben '100,000 M,' A for zai tushuguan li 'in the library,' b for wuqian ben '5000 M,' and so forth.

[29] In comparing English and Chinese relative clauses, S. Annear (1965) maintains that type (ii) is not available in Chinese. Though it is true that most Chinese are not even aware of the ambiguity in D + NUP + MOD + N, the distinction is clearly made in other arrangements: b + A + B + N; c + A + B + N can be said as A + B + N + lide + c 'the 100 books among those which are in the library and written in Chinese,' and b + A + B + N cannot be.

[30] We are not certain, however, whether in P-rules or in tree representation, of how we should show the distinction between coordination and subordination. There must be some formal distinction for, say, B + b, 'the 5,000 books written in Chinese' and B + c '100 of the books written in Chinese,' which we indicate by MOD+NUP indifferently as terminal strings.

[31] See R. Cheng (1966) for a discussion of the postulation of YEAR + MONTH + DAY + (NOON) + AR + MIR + SEC as the underlying form, from which all expressions for point in time and duration of time can be derived. (See examples below.)

[32] Our analogy in (3.7.1.) of listing and definition in set theory may fit here. The proper nouns here are the listed members in the set, whereas the durative expression is a quantitative description of the set. But it should be remembered that the proper time expressions also have a durative nature and seem to be present here to supplement the durative expressions proper. A proper time expression in this position without a durative expression is ungrammatical. Hence it is proper to assert that the scope time expressions appearing after the main verb are all durative expressions (DUR).

[33] We must regard the zhe 'this,' nà 'that' in (102) as determinatives of the individual members, and not of the whole set.

[34] An integrated analysis for a similar relationship between modifiers seems desirable. Hence we may analyze the two qualifiers Aa in AaN in Section (3.5.4.) as qualifiers in apposition, in contrast to subordination. Or, if we want to reserve the term apposition exclusively for nouns, we may derive AaN from ANaN, where AN and aN are two nominals in apposition.

[35] An example of an element in the noun phrase which is conditioned by other elements in the same noun phrase, as well

as by a certain type of conjoining of nouns is seen in languages where the plurality of the whole subject is determined not only by the determinative(s) of a noun but also by the conjoining of nouns. 'The two boys are my friends. John and Bob are my friends.' Here plurality is a notion inherent to the whole noun phrase and should be represented by a morpheme or a formative. How this notion should be formalized and how it should be introduced in a transformational grammar is a similar metatheoretical problem to what we have encountered here. Deriving all plurals by iteration of conjunctions and all numbers by one-to-one matching with numerical order, for example, is a plausible solution to this problem.

[36] We would use the term owner-owned for such cases as (117a)and (118a),which are in no way eligible for universe-scope relationship. Unlike person and body-part relationship, which are permanent and natural, this type of relationship is temporal and conventional. It should be noticed that the distinction between the two types of relationship is semantic as well as grammatical in Chinese. For a study of expressions about the person and parts of the body in English see Anna Wierzbicka, "Mind and Body--from the Semantic Point of View".

[37] If we regard (123a) as a derivation of (123a'):

123a') *lanzili de juzi you yige juzi lan le*

'Among the oranges in the basket, there is one that has got rotten.'

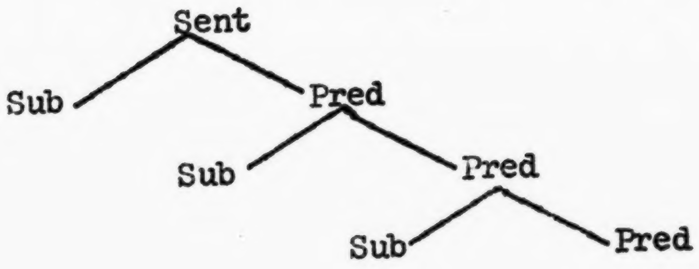
the universe before *you* should be regarded as the subject exclusively.

[38] Whether this *you* 'to have' is different from the *you* 'to be in' or 'there is' in class-member construction in Chinese is a question of analysis. It is a very probable analysis that Chinese does not distinguish these types of possession: (1) possession by an object, (2) possession by a place or a class, (3) possession by something unknown. (Hence possession by unspecified universe means indefiniteness.) The possibility of deriving the indefinite marker from the verb of possession also exists in Japanese.

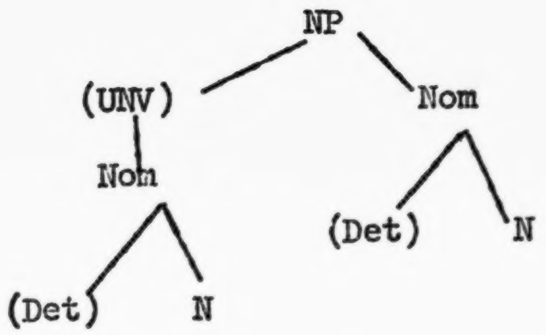
kare wa hon ga aru	'He has books.'
aru hon	'some book'

[39] Under this approach, we may need not to regard (b) as a case of class-member relation. (Cf. 116d', e', f'.)

[40] Compare their so-called successive subject-predicate predicates with our base structure for (126).



[41] Or we may have



where the universe-scope relation is indicated by UNV. This is a better alternative, since we often have NP's that have only one nominal.

[42] A transformationalist would interpret such an understood object (ta) as existing in the deep structure and deleted in the surface structure. But in the approach Chao is seeking (i.e. IC analysis), neither such a postulation nor a deletion transformation have any place.

[43] Chinese does not seem to be alone in having such a problem. For example, Japanese has the problem of differentiating NP no NP ga (usually regarded as a single subject), etc. from

NP wa NP ga (usually regarded as a double subject), etc. or NP_o, etc. from NP wa. Of interest is the view that the change from no, ga, etc. into wa in Japanese is a case of deemphasis. We think this interpretation may work here for Chinese, though in the case of Chinese change of order instead of change of case marker is involved in topicization. For such a transposition is an indication that the transposed element is already known, and should be excluded from the predicate, which is the focus of interest. Most of the native speakers with whom I discussed this, however, told me that such a transposition is for emphasis, underlining the fact that the ta, and nobody else, is the topic of the sentence.

[44] See Chomsky, 1965, p. 221, footnote 32.

"It might be suggested that Topic-Comment is the basic grammatical relation of surface structure corresponding (roughly) to the fundamental Subject-Predicate relation of deep structure. Thus we might define the Topic of the Sentence as the leftmost NP immediately dominated by S in the surface structure, and the Comment of the Sentence as the rest of the string. Often, of course, Topic and Subject will coincide, but not in the example discussed . . . "